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1959

QUEENSLAND

ANNUAL REPORT

OF THE

HEALTH AND MEDICAL SERVICES

OF THE

STATE OF QUEENSLAND

FOR THE

YEAR 1958-59

PRESENTED TO PARLIAMENT BY COMMAND

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ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH AND MEDICAL SERVICES

1958-59

The Honourable the Minister for Health and Home Affairs

SIR,—I have the honour to submit for your information the Annual Report of the Health and Medical Services Branch of the Department of Health and Home Affairs during the year ended 30th June, 1959.

ABRAHAM FRYBERG,
M.B., B.S. (Melb.), D.P.H., D.T.M. (Syd.),
Director-General of Health
and Medical Services.

STAFF

Dr. E. M. Rathus, Director of Industrial Medicine, was awarded an Overseas Travelling Scholarship by the National Health and Medical Research Council. He left Brisbane in April to visit the United States, Canada, and Britain, where he will study uranium mining, bauxite mining, radiation hazards, air pollution, and industrial medicine, particularly from the preventive aspects.

Dr. H. C. Murphy, Director of Maternal and Child Welfare, was invited by the Western Pacific Regional Division of World Health Organisation to attend a seminar on Maternity Care. It was held in Manilla from 9th to 20th March.

Dr. B. F. R. Stafford, Director of Mental Hygiene, left for Britain and the United States in April to sudy advances in mental hygiene.

Dr. Irene Waga of the Brisbane Mental Hospital and Dr. J. A. Hede of the Psychiatric Clinic were successful in passing the Diploma of Psychological Medicine while Drs. W. F. Burke, B. Nurcombe, and W. Waga, were given leave to attend lectures prior to sitting for Part II. of the Diploma.

Dr. E. W. Abrahams, Director of Tuberculosis, was invited to attend the Tuberculosis Conference held by the South Pacific Commission at Pago Pago in American Samoa from 31st October to 13th November, 1958. Dr. Abrahams was one of four tuberculosis experts invited to attend in the capacity of consultants.

Dr. Beatrice Warner retired on 31st December, 1958, Dr. Warner has given years of service to the people of Queensland, first as honorary visiting obstetrician to the Lady Bowen Hospital and later as Medical Officer in the Department. She was most kindly to her patients and handled difficult situations with the utmost tact. Dr. Warner has agreed to continue attending the Women's Clinic on two sessions a week.

Dr. B. J. Phillips was appointed Senior Medical Director, Welfare and Guidance Clinics. Dr. Phillips who is a Queensland graduate, has had wide experience in the psychiatry of children.

Senior Inspector R. P. Sanderson retired on 30th June, 1959. He joined the Department in 1913 as an assistant inspector and was promoted to Senior Inspector in 1938. He proved himself a capable officer, loyal to the Department and courteous to all with whom he came in contact.

Dr. C. F. A. Cummins was appointed Flying Surgeon with headquarters at Longreach on 11th April.

Dr. T. P. Thomas, a medical fellowship holder, was appointed Medical Officer attached to the Flying Surgeon on 1st May.

Mr. D. W. J. Smith, Senior Bacteriologist, Laboratory of Microbiology and Pathology, was awarded a World Health Organisation Fellowship to study in the United States, the United Kingdom, and Europe.

Dr. M. H. Gabriel was appointed as Health Officer from the termination of his appointment as full-time Medical Superintendent, Peel Island. During this period Dr. Gabriel has given excellent service to the patients at Peel Island and to him must go the credit for the high standard of treatment given at the Leprosaria.

INTRODUCTORY REMARKS

Although Queensland is celebrating its Centenary this year the Health Department did not come into being until the appointment of Dr. Burnett Ham who was "appointed Commissioner of Public Health by the Queensland Government to cope with a bubonic plague outbreak in Brisbane and North Queensland" in 1901.

His first report submitted to Parliament in July, 1901 dealt with adulteration of food with particular reference to preservatives. The Government Analyst stated that it was "evident the preservatives are added to many of the foods to make up for lack of care and cleanliness." It was recommended that the label indicate the amount of preservative added so that the "public might know what they are buying."

The investigation which was the basis of this report was instituted following an analysis of beer. It was pointed out that "no one would object to the sale of even beer if it was distinctly labelled "Beer with Arsenic, Poison!"

Over the years Queensland has formulated a set of Food and Drug Regulations which ensure food of a high standard of purity is supplied to the citizens of this State.

Last year a new set of Food and Drug Regulations was gazetted. These brought the food and drug laws up to date with the advance made in food production and processing by industrial chemistry. Food technology has made rapid strides since Dr. Ham made his report but food technologists might well remember that pure food does not need preservatives.

In the 1903 report "the Brisbane City Engineer reports that the preliminary survey work for the whole area of the city is so far advanced that an interim report on a scheme for the sewerage and sewage disposal thereof will shortly be submitted." Today only 40 per cent. of Brisbane is sewered.

Infectious diseases comprised a large part of the activities of the Department, the main ones being typhoid fever, diphtheria, tuberculosis, leprosy, and plague. Today, thanks to improved hygiene, the discovery of new drugs, and the practice of immunization, these diseases no longer cause concern.

The high death rate of children pointed to the necessity for action to protect child life and so the School Health Services came into being in 1911 followed by Maternal and Child Welfare in 1918. The Mental Hygiene Service was brought into line with modern thought by the establishment of psychiatric clinics. A neuro-psychiatric clinic is at the working drawings stage and day hospitals are also to be established for the treatment of the mentally ill. The value of preventive medicine in industry and its bearing on industrial peace have been proven by the Division of Industrial Medicine. The campaign against tuberculosis will be stepped up following approval for compulsory chest X-ray examination. With improved methods of treatment, personal hygiene, and the co-operation of the public, this disease will be eliminated in the foreseeable future.

Further departmental expansion is taking place. The care of the aged is a new activity. With the realisation alcoholism is a disease, a ward for the treatment of chronic alcoholics has been established at the Brisbane Hospital while guidance clinics are about to be established.

Much remains to be done. Air pollution must be controlled while it is still controllable, while the installation of sewerage schemes must be carried out by Local Authorities. By continued co-operation between the Department, Local Authorities, and the medical profession, Queensland will enjoy a high standard of "public health."

Vital Statistics

The estimated population of Queensland at 31st December, 1958, showed an increase of 23,391 (or 1·7 per cent.) as compared with 22,480 (or 1·6 per cent.) for the previous year. The estimated population in the Greater Brisbane area showed an increase of 12,500 (or 2·3 per cent.) as compared with 15,500 (or 2·9 per cent.) during 1957, while the ratio of the number of people living in the metropolitan area to the number living in the whole State for the past two years was 38·9 and 39·2 per cent. respectively.

It is interesting to note the percentage of persons living in Brisbane since the beginning of the century.

TABLE I

Showing the Population of Queensland and of Brisbane at the Various Censuses, and the Percentage of Total Population Living in Brisbane

Census Year	Queensland	Brisbane	Percentage living in Brisbane
1901	498,129	119,428	24·0
1911	605,813	139,480	23·0
1921	755,972	209,946	27·8
1933	947,534	299,748	31·6
1947	1,106,415	402,030	36·4
1954	1,318,259	502,320	38·1
1958 (estimated) ..	1,424,818	559,000	39·2

Until recently Queensland has been looked upon as a State depending on primary industry. The development of secondary industries in Brisbane caused a rapid rise of population in the metropolitan area. The policy of various Governments has always been and still is decentralisation and this policy has resulted in the rate of drift to Brisbane being halted over the past five years.

The rate of 39·2 per cent. last year compares more than favourably with New South Wales, where 54·9 per cent. of the population live in Sydney, with Victoria, where 62·9 per cent. of the population live in Melbourne, and with South Australia, where 61·1 per cent. of the population live in Adelaide.

The majority of the people live in the provincial cities and scattered throughout the sparsely populated area west of the Dividing Range. Security in health has been given them through the Royal Australian Flying Doctor Service, the Rail Dental Clinics, the Maternal and Child Welfare Service through its clinics and Rail Clinic Car, and recently by the appointment of a Flying Surgeon.

All these services have helped to reduce the feeling of isolation frequently felt by people who live in our outback areas for from medical and nursing aid.

This appointment of the Flying Surgeon is the most forward step made in giving security in health to the people living in the sparsely populated areas of north-western Queensland since the establishment of the Flying Doctor Service. The surgeon who is based on Longreach is available for consultation with doctors practising at Isisford, Blackall, Tambo, Alpha, Emerald, Clermont, Aramac, Barcaldine, Muttaburra, Winton, Hughenden, Richmond, Julia Creek, Cloncurry, Mount Isa and Mary Kathleen. Most of these towns are one-doctor towns. When a patient is admitted to hospital with a condition requiring the services of a specialist surgeon, the Flying Surgeon is notified. A chartered aeroplane is always available for his use and the surgeon accompanied by his anaesthetist who has been trained in the administration of all types of modern anaesthetics can usually reach a hospital in the most distant part of his territory within two-three hours. The area covered by the Flying Surgeon is approximately 159,000 square miles with an approximate total population of 48,000 persons. I am certain the Flying Surgeon will be responsible for the saving of lives of many patients requiring emergency surgery.

A shortage of medical officers has limited the service which is the right of these people. The position has been relieved to a degree by the appointment of State Fellowship Holders in dentistry and medicine to these areas but with the increase in intake of medical students the shortage of medical officers will, it is hoped, be overtaken in the not too distant future.

Although total number of births (33,872) was the highest on record there was a decrease in the birthrate from 24·2 to 23·9.

The infant mortality rate of 19·4 is the lowest in the history of the State. It can be anticipated that this will be increased in the future if the medical profession observes the new definition of a still birth as contained in the Registration of Births, Deaths and Marriages Act. Previous to the passing of this Act there was no definition of a still birth and the medical profession rightly, in my opinion, defined a still birth as one which had not breathed. The new definition extends this to a birth which has not breathed or shown any other sign of life; these include pulsation of the cord, movement of voluntary muscle, or heartbeat. South Australia and New South Wales have a similar definition of still birth but this differs from the remaining States where, from the definition, it is generally accepted that if a child has not breathed it has not lived. It is hoped uniformity will be achieved at the next Health Ministers' Conference, otherwise conclusions drawn from a comparison of infant mortality rates will be worthless.

The maternal mortality rates of 0·47 per 1,000 live births is also the lowest recorded in Queensland.

It is interesting to note that there was a decrease in the deaths from cancer from 1,725 in 1957 to 1,703. Queensland was the first State in Australia to establish a Cancer Institute which has always been given any equipment required for the treatment of malignancy. As an example, the linear accelerator at the Brisbane Hospital was the first to function in Australia. The general trend noticed throughout the world is that the death rate from cancer has risen over the years but it is to be hoped that modern methods of diagnosis and treatment will be responsible for a further downward trend in this State.

COMMUNICABLE DISEASES

The number of notifications of proven poliomyelitis received during the year was 3 as compared with 5 and 45 for the two previous years.

The vaccination campaign against poliomyelitis commenced in July, 1956, with the six months to under 15 years group and in the first year it was estimated that 90 to 95 per cent. of eligible children commenced vaccination. The upper age limit of this group is now 17 years and it is estimated that 90 per cent. of the 6 months to under 18 years have commenced vaccinations; 84·5 per cent. have received two injections while 77 per cent. have received three injections. It is not unreasonable to expect that when the time lapse between injections has elapsed approximately 85 per cent. of the children of this group will be fully immunised.

The response in the age group 18 to 44 years inclusive is not so good as only 51 per cent. have taken the opportunity to become vaccinated. This is good compared with the response in most other States and has been achieved by the enthusiasm shown by Local Authority Health Inspectors assisted by propaganda under the direction of the Queensland Health Education Council. The low incidence of poliomyelitis in the community is responsible for the indifference shown to vaccination and this indifference will only be overcome by an increase in incidence. This was shown by the increased response for vaccination when the news of the epidemic in the U.S.A. was published.

Providing the present rate is maintained it is doubtful whether Queensland will again experience an epidemic like that which commenced in 1950.

Seventy-three Local Authorities have offered free vaccination against smallpox to infants; three have rejected doing this while six are still giving consideration to instituting this important measure. Queensland is now within easy sailing distance of countries where smallpox is endemic. Although the Commonwealth Health Department endeavours to see no person enters Australia without a current vaccination certificate there is always the chance that a passenger who is incubating the disease will slip through. It, therefore, behoves the parents of infants to see that their babies are vaccinated early in life as the reactions produced are mild and complications rare at this age.

Diphtheria.—No notifications were received from the metropolitan area while ten were received from the extra-metropolitan area. Over 90 per cent. of children of Brisbane are immunized against diphtheria. The few cases notified are an indication of the value of immunization. Most infants are immunized within the first six months of life. Local Authorities are active in this field of preventive medicine but I cannot emphasise too strongly or often that there must be no relaxation in this.

There were no deaths from diphtheria.

Whooping Cough.—This is not notifiable in Queensland. One death occurred. Triple antigen is used by most Local Authorities. Pertussis vaccine as used now is more effective than in the past and parents should see that their children are immunized against this disease because of its seriousness in infancy.

Tetanus.—Forty notifications were received with nine deaths. This compares with 37 notifications in 1956-57 and 27 in 1957-58. Table II. shows the age distribution. Where in past years, half the cases occurred under the age of fifteen years, there are only 10 or 25 per. cent. in this group in the year under review.

TABLE II

SHOWING AGE DISTRIBUTIONS OF TETANUS NOTIFICATIONS

Age Group	Number of Cases
0– 4	2
5–14	8
15–24	6
25–39	6
40 and over	18
Total ..	40

Triple Antigen became available approximately six years ago and most Local Authorities availed themselves of it. This is usually given in the third to sixth month of life. Table IIa shows the notifications received in the 0 to 4 years age groups before and after immunization with Triple Antigen commenced and it will be seen there has been a definite fall in incidence showing the value of this procedure.

TABLE IIa

Notifications of Tetanus in 0–4 Age Group

Year	Number
1950–51	8
1951–52	4
1952–53	Immunization with Triple Antigen commenced
1956–57	2
1957–58	3
1958–59	2

Occupations of the adults varied and gave no indication of occupation at risk. It is interesting to note that eight adults gave their occupation as domestic duties. Perhaps the keenness of the housewife for gardening is a factor in this.

Children should be immunised in infancy, while those groups at special risk should also take advantage of the prophylactic measure.

The appointment of a Health Officer will enable epidemiology studies to be carried out during the current year so that a decision can be made whether a booster tetanus injection should be given with the booster diphtheria injection when a child commences school.

Q Fever.—The number of notifications for Q fever has increased from 47 in 1957-58 to 443 in the present financial year. Although there has been a big increase in the incidence of Q fever it is not as great as would appear as a number of patients were not notified previously.

Last year the presence of Q fever in sheep was reported and the work of the present year indicates that it is more wide-spread than previously thought. The spread to sheep is thought to be by ticks which have received their infection from kangaroos. If this is so, the problem of control will be a difficult one. The report of the Division of Microbiology and Pathology sets out clearly the work done in regard to the various outbreaks.

The increase in incidence has occurred mainly in meatworkers. American interests have been buyers of cattle suitable for the "hamburger" trade. Old cows are purchased and a high percentage of these are pregnant. The infected placentas could provide a dense concentration of rickettsiae for airborne dissemination.

The expansion of this export trade has resulted in an increase in staff most of whom are new to the industry and, therefore, have no immunity against Q fever. They are susceptible to the infection because of this.

Infective hepatitis.—There has been an increase in notifications of this disease from 286 to 572. The method of spread has as yet to be determined but it is thought that it might be respiratory and intestinal in origin. Control, therefore, is a matter of hygiene.

Hansen's Disease

The past year has been a most important one in the control of Hansen's Disease. Approval was given for the discharge of patients isolated at Peel Island after they had given three successive negative smears, and the closing of Peel Island as a leprosarium. Only a handful of patients will remain and these will be transferred to South Brisbane Hospital as ordinary patients of that hospital.

Dr. Gabriel attended the Seventh International Congress of Leprology held in Tokio, Japan, in November, 1958, where he raised the question of the necessity for isolation in Hansen's Disease. Congress recommended relaxation of the restrictive conditions practised in many countries. As a result of this decision it was approved that patients hospitalised in Queensland be released from isolation, even though giving positive smears, under conditions as set out in the relevant section of this Report.

In future patients will be hospitalised for such time as is necessary to stabilise them on sulphone drugs when they will be discharged to outpatients.

Trials with the new drugs which were made available for the treatment of patients suffering from Hansen's Disease are still in progress. The results are encouraging but sulphones still remain the drugs of choice.

Division of Food and Drugs

The inspection of cafes by Local Authority Health Inspectors and the supervision of all premises where food is prepared by Departmental Officers has resulted in a high standard of food hygiene. Only two outbreaks of food poisoning were reported. Milk on sale to the public is obtained from herds which are free from tuberculosis. In the metropolitan area 97 per cent. of the milk is pasteurised or heat treated and this figure is approximated in most country towns where this type of milk is available. Queensland is a large State and it is to the credit of the milk pasteurisation firms that milk can now be obtained as far west as Mt. Isa, which is 600 miles from the factory at Townsville, where it is heat treated; as far west as Longreach, 427 miles from its source, Rockhampton, and at Cunnamulla, 500 miles from Toowoomba. It is proper that a franchise should be given to these firms.

Queensland was the first State to make the installation of glass washing machines using hot water compulsory in hotels. This was followed by legislation requiring a clean glass to be given for each drink. It was a cause for concern when an appeal against the dismissal by a magistrate of a prosecution against a hotel keeper for a breach of this Regulation, was also dismissed by the Full Court. It was dismissed on the grounds that an employer could not be held responsible for an action of an employee which was against his instructions. This decision has wide implications as an unscrupulous employer could defeat the requirements of the law by placing the blame on the employee. In the above case the co-operation of the Federated Liquor Trade Employees' Union was given so that the law is still being observed. An amendment of the Health Act will be asked for to make the employer responsible for the implementation of this Regulation.

DIVISION OF TUBERCULOSIS

The notifications of tuberculosis show a fall of 63 but it is anticipated this fall will not be maintained. There has been a long delay in receiving the mass X-ray machines from England, with the result that the commencement of the compulsory X-ray campaign was deferred. This should find a number of unknown case.

The campaign will start in Cairns, where 87·5 per cent. of the boys in the sixteen years age group are tuberculin positive. It is thought that this high rate is due to infection by an organism not M. tuberculosis, which produces a positive tuberculin reaction. If this is incorrect a high incidence of tuberculosis should be found but a previous voluntary mass X-ray campaign showed this not to be so.

The death rate from tuberculosis decreased from 6·6 to 5·9 per 100,000 population and is an index of the results of modern treatment when combined with an improvement in social conditions.

DIVISION OF MATERNAL AND CHILD WELFARE

There were 16 maternal deaths from accidents and diseases of childbirth as compared with 21 last year. The number of deaths from prematurity decreased from 163 to 139. The incidence of prematurity is related to toxaemia of pregnancy, placenta praevia and other conditions. Some are unavoidable; others are avoidable with adequate ante-natal care. Of particular interest is the reduction of deaths due to toxaemia of pregnancy from six to three. This is an indication of better ante-natal supervision which in turn reduces the risk of prematurity. The ante-natal division of the Correspondence Section of the Maternal and Child Welfare Department is rendering an excellent service to expectant mothers particularly those living in isolated areas. Advice is given by letter in regard to what the expectant mother should do during her pregnancy emphasising that she must see her doctor regularly.

The publications "The Expectant Mother," "Ante-natal and Post-natal Exercises," and baby patterns are also forwarded free of charge.

The number of centres and sub-centres were expanded from 235 to 242. The nurses at these centres played an important part in the reduction of the infant mortality rate to its present low figure.

DIVISION OF MENTAL HYGIENE

In the treatment of patients in mental hospitals overseas the tendency is to allow them greater liberty of movement. At the Warlingham Park Mental Hospital of 1,000 beds which I visited when I was in England there are no locked doors. This was achieved gradually—one ward at a time being opened. In the past a big factor in the control of the patient was fear. If a patient had given a history of violence there was fear of discharging him because, having committed violence once, there was no guarantee that he would not do so again. Rather than submit to the repercussions, particularly in the Press, the patient was kept in hospital, even though the medical officer thought he was ready for discharge on leave.

A plan, educational in nature, was prepared with the result that patients in many wards are given access to the grounds, while in the refractory wards although this is not allowed, the doors are not locked. The nursing staff appreciate the fact that insufficient observation in these wards might result in a patient escaping and this might cause a public reaction to the "open ward." A consequence then might be a reversion to the previous conditions. I was informed patients did leave the ward and hospital grounds but despite the worst fears no crimes of violence have occurred.

A start has been made in the "open ward" treatment at the Brisbane Mental Hospital where there are seven open wards and at the Toowoomba Mental Hospital where there are four.

Many patients while in hospital keep in good health but when discharged they do not stand up to the stress of every-day life. In order to prepare patients for final discharge a rehabilitation unit is being established adjacent to Eventide, Sandgate, where suitable patients will be transferred before being discharged. In this way it is hoped to make the transition from hospital to every-day life a gradual one and thus avoid a recurrence of the patient's illness due to too rapid a change to every-day life.

GUIDANCE CLINICS

An excellent guidance clinic hampered by the inability to obtain a social worker is attached to the Psychiatric Clinic. It could only handle a small percentage of the persons under eighteen years of age who needed treatment. The establishment of guidance clinics attached to the Health and Medical Section of the Department is a big step forward.

One clinic will open in the immediate future. Each clinic will have a team consisting of a Director who is a child psychiatrist, a psychologist, and a social worker.

The clinics have been planned not only to treat maladjusted children but also to prevent maladjustment arising. Children spend most of their time at home or at school. In one or the other or both they will show their difficulties. The Clinic will establish a relationship with the parents of the child to find an explanation of his emotional difficulties and with the Research and Guidance Branch of the Education Department who have probably given some form of treatment before referring the child to the Guidance Clinic. The Clinic will also work in co-operation with magistrates and others concerned with delinquency. There will be co-operation with the Maternal and Child Welfare Division. By working with these agencies the Clinic will be able to give preventive and curative treatment from birth until eighteen years of age.

GERIATRICS

Approval was given to bring Dr. Marjory Warren of the Geriatric Unit of the West Middlesex Hospital, London, who was attending a conference in Sydney, to Queensland to lecture to the medical and allied professions. Dr. Warren was accompanied by her sister, Miss Enid Warren, Head Social Worker of the Hammersmith Hospital. Lectures were given to the medical profession at Cairns, Townsville, Mackay, Rockhampton, and Brisbane. Their visit has awakened a realisation that old age and chronic invalidism are not synonomous. Much can be done to rehabilitate old folk and keep them in the community.

Approval has been given for alterations to be carried out to wards at the South Brisbane Auxiliary Hospital and they will be used for in-patients, out-patients, and for a day hospital.

The position of Director of Geriatrics has been advertised and it is hoped an appointment will be made in the near future.

DIVISION OF LABORATORY SERVICES

The Laboratory Services had another busy year. The Laboratory of Microbiology and Pathology, the Government Chemical Laboratory, and the inspectorial staff of the Department co-operate as a team and this has resulted in a high standard of work.

Laboratory of Microbiology and Pathology.—No other section of the Health and Medical Services has grown so rapidly as the Laboratory of Microbiology and Pathology. It was in this Laboratory that Dr. E. H. Derrick discovered Q fever. The Laboratory has continued to take an interest in research and had taken an active part in assisting the Queensland Institute of Medical Research to classify the unknown fevers of North Queensland. The work on leptospirosis has received the highest commendation from authorities overseas. The investigations into Q fever and the epidemiological observations made should prove of value in working out the control of this disease.

Accommodation has limited expansion. A further room has been made available as a laboratory. The plans for the new laboratories on the site of the Chest Clinic have been prepared and the completion of the building will allow the Laboratory to function as a modern public health laboratory.

Government Chemical Laboratory.—The number of tests carried out was 1,351 more than in 1957-58 and is next highest to the record year of 1952-53.

The quality of milk was found to be high. The number of samples deficient in fat was low as were the number of samples found to be adulterated with water.

Despite prosecution butchers still find it economical to add preservative to mincemeat. More drastic penalties are necessary to prevent this. Milk and mincemeat are foods used by invalids and infants and should be available in a pure state.

It would appear from an examination of soft drinks that synthetic substances are replacing fruit juices. This is a matter of concern to the fruit growers of the State. It has been suggested that the Food and Drug Regulations be amended to increase the amount of fruit juice in fruit drinks. Apart from the fact that this is not practicable from the manufacturing angle, it would increase the price of the drinks with consequent replacement with synthetic flavourings so, in the interests of the fruit growers themselves, it was decided to take no action in this regard.

ALCOHOLISM

The extent to which alcoholism occurs in Queensland is difficult to ascertain. The general attitude of society towards the alcoholic is that he is a weak willed character lacking in moral fibre. This has resulted in the failure to rehabilitate the unfortunate individual who is an addict to alcohol.

It is now being realised that alcoholism is a disease and that the alcoholic is a sick person who needs help to cope with his problem. Out-patient and in-patient treatment is given at the Alcohol Clinic attached to the Brisbane Hospital. On admission the patient's physical needs are attended to. At the same time an assessment is made as to whether he wishes to get well because failure of treatment is inevitable if the desire to overcome his disability is not present. Group therapy is carried out early in treatment and continued after discharge by Alcoholics Anonymous. In my opinion the assistance given by the members of this organisation is one of the biggest factors in the alcoholic resisting his desire for the "first drink".

It is too early to assess the results being obtained at the Clinic at the Brisbane Hospital but overseas it is estimated that 40 per cent. of patients are cured; 25 per cent. of patients break occasionally; the results in a further 25 per cent. are only fair while the remaining 10 per cent. must be looked upon as failures.

VITAL STATISTICS

Population.—The estimated population of Queensland at 31st December, 1958, was 1,424,818, an increase of 23,391 (or 1·7 per cent.) for the year. The estimated population living in the Greater Brisbane area was 559,000, an increase of 12,500 (or 2·3 per cent.) during 1958.

The population density per square mile is 2·14 persons for the whole of Queensland, 1,452 persons in the Greater Brisbane area, and 1·30 persons for the rest of the State; 39·2 per cent. of the population of the State reside in the Metropolitan area.

Births.—During 1958 births registered in Queensland totalled 33,872, an increase of 109 on the previous year, which was the highest number on record. The crude birth rate was 23·9, compared with 24·2 in 1957. The births comprised 17,443 males and 16,429 females, giving a masculinity rate of 106·2, which is slightly above the normal rate of about 105.

TABLE III

Crude Birth Rate (per 1,000 Population)

——	1953	1954	1955	1956	1957	1958
Commonwealth of Australia	22·9	22·5	22·6	22·5	22·9	22·6
Queensland	**23·9**	**23·7**	**24·2**	**23·7**	**24·2**	**23·9**
New South Wales	22·1	21·3	21·3	21·3	21·9	21·7
Victoria	22·4	22·3	22·3	22·4	22·6	22·4
South Australia	23·4	22·9	22·5	22·3	22·3	22·4
Western Australia	25·5	24·9	25·2	25·0	24·5	23·7
Tasmania	25·3	25·0	25·6	25·2	25·5	25·4
New Zealand	24·1	24·7	24·9*r*	24·7*r*	24·8	25·2
United Kingdom	15·9	15·6	15·5	16·1	16·5	16·8
United States of America	24·6	24·9	24·6	24·9	25·0	24·3
Canada	28·1*r*	28·5*r*	28·2*r*	28·0	28·2*r*	27·7

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The natural increase (excess of births over deaths) was 22,417, being equal to an increase of 1·6 per cent. of the population.

Deaths.—For the year 1958 deaths from all causes totalled 11,455, giving a crude death rate (deaths per 1,000 mean population) of 8·1 compared with 8·4 in the previous year, and still below the crude death rate of the Commonwealth of Australia. Table IV. compares the crude death rates of Queensland, other States, and certain overseas countries since 1952.

TABLE IV

Crude Death Rate (per 1,000 Population)

——	1953	1954	1955	1956	1957	1958
Commonwealth of Australia	9·1	9·1	8·9	9·1	8·8	8·5
Queensland	**8·5**	**8·6**	**8·4**	**8·9**	**8·4**	**8·1**
New South Wales	9·4	9·5	9·3	9·6	9·2	8·8
Victoria	9·5	9·2	8·9	9·2	9·0	8·6
South Australia	9·0	9·0	9·2	8·9	8·7	8·6
Western Australia	8·2	8·4	8·2	8·2	7·7	7·9
Tasmania	8·3	8·7	7·9	7·8	8·1	8·0
New Zealand	8·8	9·0	9·0	9·0	9·4*r*	8·9
United Kingdom	11·4	11·4	11·7	11·7	11·5	11·7
United States of America	9·6	9·2	9·3	9·4	9·6	9·5
Canada	8·6	8·2	8·2	8·2	8·2*r*	7·8

r Revised.

The causes of death to residents of Queensland during 1958 are shown in Table V.

TABLE V

Showing Causes of Death of Residents of Queensland, 1955–1958

Causes of Death	Males	Females	Total 1958	Persons		
				1957	1956	1955
Tuberculosis of Respiratory System	60	20	80	88	76	130
Tuberculosis, other	3	..	3	4	5	7
Diphtheria	..	..	..	1	3	10
Whooping Cough	..	1	1	4	..	..
Tetanus	7	2	9	12	15	10
Acute Poliomyelitis	..	..	..	1	5	5
Measles	1	..	1	..	10	2
Other Infectious and Parasitic Diseases	53	40	93*a*	62	98	82
Malignant Neoplasms	972	731	1,703	1,725	1,696	1,601
Neoplasms, Benign and Unspecified	27	29	56	31	44	48
Hay Fever and Asthma	23	18	41*a*	79	80	73
Diabetes Mellitus	63	93	156	116	133	137
Other Allergic, Endocrine System, Metabolic, and Nutritional Diseases	17	18	35	42	43	41
Pernicious and other Hyperchromic Anaemias	4	6	10	15	18	21
Other Diseases of the Blood and Blood-forming Organs	29	15	44	45	45	40
Mental, Psychoneurotic and Personality Disorders	49	15	64	73	87	87
Vascular Lesions affecting the Central Nervous System	676	740	1,416	1,475	1,567	1,404
Other Diseases of the Nervous System and Sense Organs	120	83	203	197	194	185
Diseases of the Heart	1,993	1,250	3,243	3,202	3,450	3,199
Hypertensive Disease	256	235	491	494	533	552
Other Diseases of the Circulatory System	192	135	327*a*	304	271	296
Influenza	5	7	12	51	38	28
Lobar-pneumonia	52	40	92	119	123	98
Broncho-pneumonia	89	88	177	170	237	149
Other and Unspecified Pneumonia	37	33	70	141	122	70
Bronchitis	107	31	138*a*	125	149	103
Other Diseases of Respiratory System	131	68	199	228	218	196
Diseases of Stomach and Duodenum	72	25	97	105	107	103
Appendicitis	9	7	16	26	26	28
Diseases of Liver, Gallbladder, and Pancreas	62	58	120	123	140	132
Other Diseases of Digestive System	85	91	176	183	174	206
Nephritis and Nephrosis	130	107	237	279	301	271
Diseases of Male Genital Organs	83	..	83	76	90	88
Other Diseases of Genito-Urinary System	51	66	117	110	103	123
Deliveries and Complications of Pregnancy, Childbirth, and Puerperium	..	16	16	21	29	20
Diseases of the Skin and Cellular Tissue	9	17	26	37	28	25
Diseases of the Bones and Organs of Movement	21	30	51	44	47	40
Congenital Malformations	84	64	148	169	193	170
Intra-cranial and Spinal Injury at Birth	43	25	68	69	47	66
Other Birth Injury	25	15	40	38	45	43
Post-Natal Asphyxia and Atelectasis	36	25	61	58	61	66
Infections of Newborn	16	9	25	32	25	23
Immaturity Unqualified	83	56	139	163	188	137
Other Diseases Peculiar to Early Infancy	39	30	69	71	73	63
Senility without mention of Psychosis	62	69	131	174	197	136
Symptoms Referable to Systems or Organs	9	1	10	16	13	14
Ill-defined and Unknown Causes	16	7	23	41	31	33
Motor Vehicle Traffic Accidents	289	65	354	312	316	276
Accidental Falls	80	128	208	186	180	188
Accidental Drowning and Submersion	55	18	73	58	73	60
Other Accidents	227	41	268	264	276	258
Suicide and Self-Inflicted Injury	161	51	212	199	145	151
Homicide and Injury Purposely Inflicted by Other Persons	16	7	23	21	18	16
Total from all Causes	6,729	4,726	11,455	11,679	12,186	11,307

a Due to the introduction of the Seventh Revision of the International Stat. Classification of Diseases, Injuries, and Causes of Death, figures shown are not comparable with those of previous years.

Diseases of the heart, hypertension and vascular lesions affecting the nervous system, were again the greatest cause of death in the population.

There were 1,703 deaths from cancer as compared with 1,725 in 1957.

In every 100 male deaths, 40 died of a degenerative vascular disease, 14 of cancer, and 10 of accident. In every 100 female deaths, the respective figures are 40, 15, and 5. The fatal accident rate is twice as high in males as in females.

TABLE VI

Infant Mortality Rates (Deaths under One Year per 1,000 Live Births)

—	1953	1954	1955	1956	1957	1958
Commonwealth of Australia	23·3	22·5	22·0	21·7	21·4	20·5
Queensland	**25·0**	**22·3**	**20·3**	**22·7**	**21·7*r***	**19·4**
New South Wales	24·6	25·3	24·9	23·5	22·7	21·3
Victoria	21·2	19·3	18·4	19·3	20·2	19·2
South Australia	20·7	21·3	23·3	19·9	20·6	22·4
Western Australia	23·8	22·5	22·4	22·7	21·1	21·5
Tasmania	22·9	23·9	23·4	22·0	20·2	19·5
New Zealand	20·1	20·0	20·1	19·4	20·0*r*	19·4
United Kingdom	27·6	26·3*r*	25·9*r*	24·4	23·9*r*	*
United States of America	27·8	26·6	26·4	26·0	26·4	26·9
Canada	35·6	31·9	31·3	31·9	30·9	*

* Not available. *r* Revised.

Marriages.—Registration of marriages during the year totalled 10,255, compared with 10,271 in 1957. The marriage rate was 7·3 per thousand mean population, compared with 7·4 in 1957. Marriages of minors during the year totalled 4,971, of whom 989 were males and 3,982 females.

Infant Mortality.—The infant mortality rate of Queensland and other States and certain overseas countries is shown in Table VI., while Table VII. is a composite one showing the birth rates, infant mortality, and reproduction rates of Queensland compared with the Commonwealth of Australia.

TABLE VII

Birth, Infant Mortality, Maternal Mortality, and Reproduction Rates, Queensland and Australia.

—	Crude Birth Rate		Infant Mortality Rate		Maternal Mortality Rate (1)		Gross Reproduction Rate (2)		Net Reproduction Rate (3)	
	Queensland	Australia	**Queensland**	Australia	**Queensland**	Australia	**Queensland**	Australia	**Queensland**	Australia
1946	**24·8**	23·7	**29·3**	29·0	**2·26**	1·85	**1·55**	1·46	**1·42**	1·33
1947	**25·6**	24·1	**30·8**	28·5	**1·62**	1·87	**1·64**	1·49	**1·54**	1·36
1948	**24·7**	23·1	**28·0**	27·8	**1·47**	1·40	**1·59**	1·45	**1·51**	1·33
1949	**24·0**	22·9	**24·7**	25·3	**1·44**	1·21	**1·56**	1·46	**1·48**	1·33
1950	**24·4**	23·3	**24·8**	24·5	**1·45**	1·09	**1·60**	1·49	**1·52**	1·42
1951	**24·2**	23·0	**25·7**	25·2	**1·18**	1·05	**1·62**	1·49	**1·54**	1·21
1952	**24·6**	23·3	**24·9**	23·8	**1·03**	0·94	**1·67**	1·55	**1·59**	1·47
1953	**23·9**	22·9	**25·0**	23·3	**0·71**	0·62	**1·65**	1·56	**1·57**	1·48
1954	**23·7**	22·5	**22·3**	22·5	**0·96**	0·69	**1·67**	1·56	**1·62*r***	1·50*r*
1955	**24·2**	22·6	**20·3**	22·0	**0·62**	0·64	**1·71**	1·59	**1·65*r***	1·53*r*
1956	**23·7**	22·5	**22·7**	21·7	**0·89**	0·56	**1·72**	1·61	**1·66*r***	1·55*r*
1957	**24·2**	22·9	**21·6**	21·4	**0·62**	0·63	**1·78**	1·66	**1·72*r***	1·60*r*
1958	**23·9**	22·6	**19·4**	20·5	**0·47**	0·50	**1·79**	1·67	**1·72**	1·60

r Revised rates based on 1953–55 Mortality experience.

(1) *Maternal Mortality Rate.*—Deaths from puerperal causes per 1,000 live births.

(2) *Gross Reproduction Rate.*—Represents the number of female children born on the average to women living right through the child-bearing years if the conditions on which the rate is based continue.

(3) *Net Reproduction Rate.*—Is the gross reproduction rate corrected for deaths of females from birth to the end of the child-bearing period. It is a more accurate index than the gross reproduction rate. Unless it exceeds unity the population is not replacing itself.

The net reproduction rate is higher than the Australian average, whilst the maternal mortality rate declined from 5·77 in 1911 to 0·47 in 1958.

If the crude death rate had remained at the level prevailing in 1900, over 5,000 additional deaths would have occurred in Queensland during 1958. In addition, the expectation of life has been increased by 15 years during that period.

DIVISION OF PUBLIC HEALTH SUPERVISION

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INSPECTORS IN CHARGE OF DISTRICT OFFICES:

Townsville: H. P. LOWES	Cairns: W. T. JOHNSTON
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SECTION OF COMMUNICABLE DISEASE CONTROL

The aims of public health today are not confined only to the control of infectious diseases and the enforcement of standards of sanitation for the environment and for foods. The prevention of mental sickness, the epidemiology of non-communicable diseases, the control of pollution of air and water, the hazards of radioactivity, and the study of the diseases of modern society are looming so large in the foreground of the public health field, that the traditional activities of an efficient public health department may tend to be overlooked; but these methods are still the backbone of the public health. Once these standards are relaxed or forgotten, increased death and morbidity rates will reflect the change.

It is appropriate, therefore, to review every year the incidence of certain communicable diseases that are notifiable by law. It is common knowledge that some of these are poorly notified by the medical profession. Scarlet fever and bacillary dysentry are typical. On the other hand, diseases such as poliomyelitis and tetanus are notified exceedingly well, and it is right that doctors should be complimented. If the contemplated amendments of the Health Acts become law, there will be changes in the list of notifiable diseases and in the manner of their notification, but for the present year, there is no change.

Tables VIII. and IX. show the reported incidence of notifiable diseases in the metropolitan and extra-metropolitan areas during the year.

The total number of notifications received was 3,006 (1,171 in Brisbane) compared with 2,672 (1,005) in the previous year. Principal increases were recorded in Q fever (396 more), infective hepatitis (286), infantile diarrhoea (92), and malaria (26), while principal decreases in notifiable diseases were anchylostomiasis (89 less), leptospirosis (65), scarlet fever (50), and rubella (224). Some of these diseases are dealt with in more detail below.

TABLE VIII

COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1958, TO 30TH JUNE, 1959
METROPOLITAN AREA (POPULATION AT 1ST JULY, 1958—555,000)

Diseases	Months												Totals 1958–59	Totals 1957–58
	1958						1959							
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June		
Anchylostomiasis	3	..	..	3	..	..	..	..	..	..	..	..	6	9
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Breast Abscess	4	2	2	7	1	..	..	3	2	4	5	7	37	24
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Coastal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile)	6	11	26	19	9	15	24	10	6	5	1	4	136	56
Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Dysentery, Amoebic	..	..	1	..	..	..	..	..	2	..	..	..	3	..
Dysentery, Bacillary	3	2	3	..	3	4	8	5	..	1	1	1	31	46
Encephalitis Lethargica	..	1	1	..	..	..	..	1	..	..	..	..	3	1
Erythema Nodosa	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hansen's Disease	1	..	1	..	..	..	..	..	..	..	..	..	2	1
Hepatitis, Infective	4	4	8	6	7	7	9	17	53	14	8	19	156	29
Lead Poisoning	3	..	..	..	..	..	..	1	1	..	..	1	6	1
Leptospirosis (Weil's Disease, Para-Weil's Disease, Seven-day Fever)	3	..	..	1	1	..	..	2	..	..	7	1	15	8
Malaria	1	1	..	..	..	1	2	5	..	4	6	1	21	5
Meningitis, Cerebro-spinal	2	2	1	1	1	2	..	..	..	..	1	..	10	13
Mossman Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague, Bubonic or Oriental	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pleural Effusion	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Poliomyelitis	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Puerperal Fever	..	1	..	..	..	..	..	..	..	..	..	..	1	..
Puerperal Pyrexia	..	..	4	5	..	..	..	..	..	..	..	..	9	2
Q Fever	4	5	..	8	3	..	7	9	24	40	40	45	185	24
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	11	8	7	6	9	10	6	11	3	10	7	1	89	66
Rubella	..	1	4	4	2	1	3	..	..	1	..	..	16	202
Sarina Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	9	8	3	3	5	4	5	4	11	2	6	6	66	80
Smallpox (including Amaas or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus	..	2	2	..	1	2	2	..	1	1	..	..	11	10
Tuberculosis (all forms)	20	27	35	34	23	23	30	56	14	20	24	56	362	409
Typhoid Fever (including Paratyphoid Fevers)	..	..	1	..	1	..	1	..	..	..	..	..	3	4
Typhus Fever—														
Scrub	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tick	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Murine	2	..	..	..	1	..	..	..	..	..	..	..	3	1
Undulant Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	76	75	99	97	67	69	97	124	117	102	106	142	1,171	1,005

TABLE IX

COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1958, TO 30TH JUNE, 1959
EXTRA-METROPOLITAN AREA (POPULATION AT 1ST JULY, 1958—862,404)

Diseases	Months												Totals 1958–59	Totals 1957–58
	1958						1959							
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June		
Anchylostomiasis	1	4	14	..	8	7	..	12	1	2	2	6	57	143
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Breast Abscess	10	7	7	14	4	5	9	5	10	3	6	8	88	92
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile)	4	7	5	5	2	..	2	10	12	8	2	1	58	43
Diphtheria	3	3	..	2	..	..	..	..	1	1	..	..	10	4
Dysentery, Amoebic	..	..	4	..	..	..	..	..	4	..	..	..	8	4
Dysentery, Bacillary	5	7	..	2	4	2	..	8	..	2	3	1	34	23
Encephalitis Lethargica	..	1	..	..	..	..	..	..	..	1	..	..	2	2
Erythema Nodosa	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Hansen's Disease	1	..	..	..	..	..	1	1	1	1	1	..	6	6
Hepatitis, Infective	32	21	42	39	59	25	30	42	25	11	48	42	416	257
Lead Poisoning	..	..	..	..	..	..	1	..	..	1	..	1	3	8
Leptospirosis (Weil's Disease) Para-Weil's Disease, Seven-day Fever)	13	2	1	6	2	7	..	8	18	12	12	4	85	157
Malaria	1	2	..	1	1	2	1	2	2	..	1	3	16	6
Meningitis, Cerebro-spinal	3	2	2	1	..	1	2	..	..	..	1	3	15	32
Mossman Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague, Bubonic or Oriental	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pleural Effusion	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Poliomyelitis	1	..	..	..	..	..	2	..	..	..	1	1	5	3
Puerperal Fever	..	4	4	..	..	2	..	3	2	..	..	1	16	13
Puerperal Pyrexia	..	3	3	4	1	3	3	4	3	8	9	9	50	22
Q Fever	3	4	1	..	..	4	3	14	59	64	59	47	258	23
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	23	16	15	33	7	9	6	6	5	6	4	8	138	155
Rubella	2	..	1	2	..	..	..	..	..	..	1	..	6	44
Sarina Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	10	13	12	8	7	6	2	4	1	6	8	11	88	124
Smallpox (including Amaas or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus	3	1	4	3	2	1	1	..	5	1	6	2	29	17
Tuberculosis (all forms)	42	29	26	40	30	35	38	51	37	22	31	46	427	443
Typhoid Fever (including Para-typhoid Fevers)	..	1	..	1	..	..	..	..	..	1	2	..	5	4
Typhus Fever—														
Scrub	..	..	..	..	3	..	..	..	..	1	..	..	4	22
Tick	..	..	1	..	..	2	..	..	..	..	..	1	4	..
Murine	..	1	..	..	..	..	..	..	..	..	..	1	2	10
Undulant Fever	..	1	..	1	..	2	..	1	..	..	..	..	5	7
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	157	129	142	162	130	113	101	171	186	151	197	196	1,835	1,667

TABLE X

NOTIFIED INCIDENCE OF COMMUNICABLE DISEASES IN QUEENSLAND (EXCLUSIVE OF VENEREAL DISEASES), SECTION 29 OF "THE HEALTH ACTS, 1937 TO 1955," DURING THE CALENDAR YEAR 1958

Diseases	Metropolitan Area	Outside Areas	Total for Queensland, 1958	Total for Queensland, 1957
Anchylostomiasis	11	71	82	212
Anthrax	..	..	..	..
Bilharsiasis	..	..	..	..
Breast Abscess	26	96	122	57
Cholera	..	..	..	..
Coastal Fever	..	..	..	..
Diarrhoea (Infantile)	117	50	167	106
Diphtheria	..	10	10	16
Dysentery, Amoebic	1	6	7	2
Dysentery, Bacillary	45	33	78	100
Encephalitis Lethargica	3	1	4	2
Erythema Nodosa	..	..	..	..
Filariasis	..	2	2	..
Hepatitis, Infective	49	420	469	71
Lead Poisoning	4	6	10	5
Hansen's Disease	3	5	8	2
Leptospirosis	10	78	88	197
Malaria	7	11	18	31
Meningitis, Cerebro-spinal	16	15	31	47
Mossman Fever	..	..	..	..
Plague	..	..	..	..
Pleural Effusion	1	1	2	5
Poliomyelitis (acute anterior)	2	3	5	24
Puerperal Fever	1	16	17	12
Puerperal Pyrexia	9	25	34	18
Q Fever	25	25	50	35
Relapsing Fever	..	..	..	..
Rheumatic Fever	75	201	276	184
Rubella	19	8	27	241
Sarina Fever	..	..	..	..
Scarlet Fever or Scarlatina	64	113	177	203
Smallpox	..	..	..	..
Tetanus	13	19	32	30
Tuberculosis	342	422	764	762
Typhoid Fever	7	4	11	6
Typhus Fever—				
Scrub	..	8	8	33
Tick	..	3	3	1
Murine	3	5	8	18
Undulant (Malta) Fever	..	10	10	4
Yellow Fever	..	..	..	..
Totals	853	1,667	2,520	2,424

ANCHYLOSTOMIASIS

Notifications fell from 152 in 1957-58 to 63 last year. This is merely an apparent decline because the main foci of the disease are in aboriginal settlements and missions north of Cairns, where there is no regular medical service. Here infestation is diagnosed by routine surveys from the Hookworm Control Office in Cairns. As the report from this office indicates, 947 cases were detected in aborigines during the year compared with 1,282 in the previous year. Here, again, some of the missions with the highest incidence of infection (up to 75 per cent.) were not visited during the year for diagnostic survey, but routine treatment with tetrachlorethylene was carried out.

Present treatment of hookworm is unsatisfactory. Most infestations are due to Anchylostoma rather than to Necator, and the former are much more resistant to treatment. Indeed, one dose of tetrachlorethylene or hexylresorcinal may not remove more than 20 per cent. of the harboured worms. Too frequent treatments, especially in young children, can be dangerous, and it is usually only possible to treat three or four times a year. In the interval, re-infection occurs so that the total worm load may be much the same as before.

A new drug at present under trial at the Queensland Institute of Medical Research gives great promise of being much more successful than anything tried in the past. If this drug lives up to its preliminary trials a tremendous advance will have been made in the control of this serious endemic disease in our aboriginal population.

BREAST ABSCESS

Notifications of breast abscess reached 125, compared with 116 in the previous year. There is little doubt that the great majority of these are staphylococcal infections which were contracted as a sequel of a recent stay in a maternity hospital, where mother or baby and perhaps both returned home infected.

When penicillin was first introduced, staphylococcal infections of all kinds responded miraculously and it was hoped that *Staphylococcus aureus* would be eliminated from hospitals. Unfortunately, the organism quickly reacted by developing penicillin resistant strains, and every year the number of resistant strains has increased until it is the exception rather than the rule to isolate a sensitive strain. As each new antibiotic was introduced, the staphylococcus quickly adapted itself, so that it is once more the principal cause of hospital infections of all kinds. The control of hospital infections is again the subject of major study projects elsewhere. There is no easy solution. The organism infects the nurses and doctors; it is present in dust, in blankets, and in the air itself; but many of the strains isolated may not be responsible for ward infections.

All control must start with identification of the organism—and identification can be much more precise since the development of phage typing. During the coming year, my Department intends to make a survey of staphylococcal infections at the Brisbane Women's Hospital to determine the prevailing phage types from time to time and to trace their spread from person to person. It will then be possible to institute better control measures. Each hospital has its own particular problem in infections and control methods used elsewhere might not yield the same results unless the circumstances of admission, discharge, and treatment are identical.

DIPHTHERIA

For the first time, no notifications of diphtheria were received in the Greater Brisbane area. Ten notifications were from country districts, including three in persons who had received basic immunization only. The continued decline of diphtheria is one of the major public health phenomena of our time. The disease is just not present any more in a concentration capable of setting up an epidemic. But as the children of today grow up and in their turn become parents, we must ensure that active immunization is maintained at a level which will prevent spread of diphtheria strains when they return. For, if history is any criterion, diphtheria occurs in waves and it will recur some time in the future. We are now in a trough and must not be caught unawares when the next wave breaks upon us.

FILARIASIS

In 1909 there was no legal power to destroy mosquitoes and more than 15 per cent. of patients in the Brisbane General Hospital had microfilariae circulating in their bloodstreams. In 1940 there were no microfilariae seen in a survey of 300 patients at the same hospital, indicating a dramatic decline. It is logical to say that the disease was eradicated because of the active mosquito control programme, but this interpretation should be examined critically. Although there is no doubt that mosquitoes are fewer now in Brisbane than they were fifty years ago, the Brisbane citizen of 1959 will not agree that mosquitoes are not a nuisance in most suburbs during summer. Certainly, some of the mosquito population comprises *Aedes vigilax,* which is a swamp mosquito and a vicious biter, and which is blown into the city by prevailing winds, but *Culex fatigans,* the vector of filaria, is still too far prevalent in Brisbane, and it appears to be numerous in the better class unsewered suburbs. It is clear that these mosquitoes are breeding in septic tanks, and steps, therefore, should be taken to prevent this. Proper screening of the vents through which the mosquitoes enter is the only satisfactory solution.

INFECTIVE HEPATITIS

During the year 572 cases were notified compared with 286 in 1957-58. Brisbane contributed 156 cases. Other towns to provide more than 20 cases were Mt. Morgan (48), Charters Towers (32), and Toowoomba (29), whilst Cloncurry Shire notified 27 cases, and Inglewood (22), Flinders (18), Goondiwindi (14), Winton (14), Beaudesert (13), and Belyando (12) were shires with more than ten notified cases. Months in which more than 50 cases were notified were March (78 cases), November (66), June (61), February (59), May (56), and September (50). This does not indicate a seasonal distribution. The age distribution of 858 notified cases (including 286 cases notified in 1957-58) is as follows:—

Age Group	Number of Patients	Percentage
		Per Cent.
0– 4 years	33	4·0
5–14 years	304	37·0
15–24 years	154	18·8
25–39 years	244	29·7
40 years and over	86	10·5
Unstated	37	..
	858	100·0

It is seen that children under the age of five years rarely develop hepatitis (or at least hepatitis with jaundice), whilst the incidence in school children is twice as high as expected on a population basis.

This is a disease which is not easily controlled. Although the causal agent is a virus, it cannot be grown by any method, and there is yet available no diagnostic test which will indicate past or present infection. In addition, the exact mode of spread is conjectural—it is almost certainly spread by fingers, food, and flies, but perhaps it could be transmitted in other ways (e.g. by droplets). Almost certainly, many cases occur without jaundice, yet in the absence of an epidemic it is impossible to diagnose any of these with assurance. Even when the disease has been diagnosed, however, there is little that can be done to treat the patient. Rest and activity, and high fat, low fat, and low protein diets have had their advocates and have been subjected either to clinical trial or to trial and error. In every instance, results of a particular treatment are equivocal, and most patients appear to recover in time. There is clearly need for further study of this interesting disease which threatens to displace typhoid and paratyphoid as an index of the standard of sanitation of a community. The comparison is an unjust one, however, and it should not be made.

Until specific means are evolved to diagnose, treat, and prevent infective hepatitis, all we can do is collect as much useful information about it as we can.

LEPTOSPIROSIS

Although only 100 cases of leptospirosis were notified, the number of cases diagnosed in the Reference Laboratory was 186, and this would include all notified cases. Of these, 173 patients were Queenslanders.

In view of the multiplicity of biotypes now found in this State, the serological diagnoses of leptospirosis involves testing with at least eleven known types and this is very time consuming. Nevertheless, the results yielded are of great value and the type of infection from which the patients suffered is set out in Table XI. The occupations followed by the patients are set out in Table XII. From these figures it will be seen that *Leptospira pomona* caused 102 cases (55 per cent. of the total), and *L. hyos* caused 29 cases (16 per cent.). Next most common types were *L. australis A* (11 cases) and *L. esposito* (10 cases) while dual infections were responsible for infection in 9 cases. Meatworkers and meat inspectors contributed 61 cases (33 per cent. of the total), whilst dairy and pig farmers and their employees contributed 29 (15·3 per cent.). The sugar cane industry had 20 cases (11 per cent.) and school children and housewives comprised 16 cases—some .of whom no doubt became infected at the farms on which they lived. It is quite clear that the major hazard, at least so far as human infection is concerned, lies in associating with cattle, calves and pigs. The great majority of infections following contact with pigs and cattle would be due to *L. pomona* and *L. hyos* which are endemic in these animals. It can, therefore, be said that 70 per cent. of infections were due to one of these types, and that *L. pomona* caused rather more cases of leptospirosis last year than all of the other types together.

Leptospirosis remains principally an occupational disease to which certain types of workers are exposed. It should surprise no one that 186 cases of leptospirosis should be diagnosed in Queensland last year. This would be about average—there was no epidemic and cases came from a wide area of the State where the disease is endemic. There is no doubt, however, that the excellent methods used to screen sera at the Laboratory of Microbiology and Pathology are responsible for many cases that would otherwise escape diagnosis. If other States used the same methods on the same range of serum samples, there is no doubt that they too would discover many cases of leptospirosis which now pass undiagnosed, for in nearly all States the population of pigs, calves, and dairy cattle is as great as in Queensland.

TABLE XI

SHOWING STATISTICAL DIVISIONS WHERE CASES OF LEPTOSPIROSIS LIVED, TOGETHER WITH THE BIOTYPE CAUSING INFECTION

Statistical Division	Ictero	Canicola	Aust. B.	Robinson	Aust. A.	Esposito	Pomona	Medanensis	Hyos	Celladoni	Dual Infections	Hebdonadis Sero. Group	Totals	Males	Females
Greater Brisbane	1	..	..	..	2	3	39	..	13	..	2	..	60	57	3
Moreton	1	..	..	..	..	..	15	2	1	..	..	..	19	17	2
Maryborough	..	..	..	..	..	..	15	..	5	..	..	..	20	20	..
Downs	..	1	..	..	..	1	7	..	1	..	..	..	10	8	2
Roma	..	..	..	..	..	1	..	..	1	..	..	..	2	2	..
South Western	..	..	..	..	..	1	1	..	..	..	..	..	2	1	1
Rockhampton .. .. .. / ..	..	..	..	..	..	..	6	..	..	..	..	..	6	5	1
Central Western	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Far Western	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..
Mackay	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Townsville	..	1	..	..	..	1	2	..	1	..	..	..	5	5	..
Cairns	..	3	5	3	9	3	8	..	3	4	6	3	47	45	2
Peninsula	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..
North Western	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Outside Queensland	..	..	..	..	..	..	9	..	3	..	1	..	13	13	..
Totals	2	5	5	4	11	10	102	2	29	4	9	3	186	175	11

TABLE XII

Showing Occupations of Patients with Leptospirosis, together with Biotypes Causing Infection, 1958–59

Occupation	Ictero	Canicola	Aust. B.	Robinson	Aust. A.	Esposito	Pomona	Medanensis	Hyos	Celladoni	Dual Infections	Hebdonadis Sero. Group	Totals	Percentage
Meat Industry	2	..	..	..	3	..	33	2	10	..	2	..	52	28·1
Meat Inspectors	..	..	..	..	..	..	7	..	2	..	..	..	9	4·9
Dairy Industry	..	..	..	..	1	..	14	..	6	..	..	..	21	11·4
Pig Farmers	..	..	..	..	..	..	8	..	..	..	..	..	8	4·3
Cane Industry	..	3	2	2	6	1	4	..	..	..	2	..	20	10·8
Housewives	..	1	..	..	..	2	2	..	..	..	..	1	6	3·2
Cattle Industry	..	..	..	..	..	2	2	..	1	..	..	..	5	2·7
School	..	..	..	..	..	2	4	..	2	1	..	1	10	5·4
Others	..	1	3	1	..	2	14	..	8	1	1	..	31	16·8
Not Stated	..	..	..	1	1	1	13	..	..	2	4	1	23	12·4
Totals	2	5	5	4	11	10	101	2	29	4	9	3	185	
Percentage	1·1	2·7	2·7	2·2	5·9	5·4	54·6	1·1	15·7	2·2	4·9	1·6		100·0

MALARIA

This year 37 cases of malaria were notified of which 21 were in the Greater Brisbane area. This compares with 11 cases (5 in Brisbane) in the previous year. In country centres, 3 were notified from Torres Straits and these could have been infected in that area which has frequent contacts with New Guinea. The other 34 cases, however, were in ex-servicemen or visitors, and these all contracted infection outside Australia.

Nevertheless the continued occurrence of introduced cases of malaria in Queensland is a constant reminder that malaria can spread in this State if the vectors are prevalent and uncontrolled. Mosquito control programmes, particularly north of the Tropic, must be continued until vector control has been established within a mile of habitations in urban areas. In cities such as Cairns, this means perpetual mosquito control because of the low-lying nature of the country in the city area and because of the high rainfall.

MENINGITIS

Every year about 20 cases of cerebrospinal meningitis are notified. The disease is mildly endemic, as in most western countries, but there has been no explosive outbreak in any part of the State. Meningitis is a disease which, for some reason or other appears to cause parental consternation. When a case occurs at a school numerous enquiries are received from parents. If all family and close contacts are given sulpha therapy for a few days it is most unusual to get another case. Meningitis was once incurable and carried a high mortality but the picture today is vastly different and a single case should cause no public alarm.

POLIOMYELITIS

Five cases were notified during the year but only three of these have been accepted by the Poliomyelitis Committee in Melbourne. The other two are still inconclusive. Notified cases were a 17-year-old girl in Bundaberg, a 4-year-old girl in Ipswich, a baby three months old in Rockhampton, a seven-months baby in Innisfail and an 8-year-old boy in Mt. Isa. The Ipswich patient had had three doses of Salk vaccine but this was the only immunized person to develop paralytic poliomyelitis.

Further observations on poliomyelitis will be found in the section of this Report which deals with School Health Services but it may be stated here that the 51 per cent. response of the 18-44 years age group is most satisfactory in comparison with the response rate experienced in most other States. A great deal of the credit for this must be given to the Queensland Health Education Council.

The future behaviour of poliomyelitis in a population that is at least 50 per cent. actively immunised must be a matter of speculation because not enough time has yet elapsed to test the extent and duration of immunity provoked by vaccination. If experience in the United States is any guide, poliomyelitis will increase gradually year by year as immunity wanes and as the population of non-immunes continues to increase. The coming summer months may provide a test for the Commonwealth produced vaccine.

Recently, more experimental work has been carried out overseas with avirulent vaccines given by mouth and it is clear that the oral vaccines tested give a very solid immunity. However, the complete safety of such living vaccines is not entirely solved. The avirulent strains used in the vaccines are themselves mutations of virulent strains. The stability of a mutant poliovirus has not so far been satisfactorily established but once safety of a living vaccine is assured there will be little objection to its use.

Q FEVER

Considerable detail of work on this interesting disease will be found in the report of the Laboratory of Microbiology and Pathology but particulars about notified cases during the year are given below.

During 1958-59, 443 cases of Q fever were notified compared with 47 cases the previous year. This is a very steep increase and there are several possible explanations. In the first place, the notified cases include many which were infected during 1957-58 but which were not notified then. They were notified this year following a warning to doctors that they should notify all cases or face prosecution. This resulted in a crop of notifications. The failure to notify

Q fever is partly due to the fact that specific diagnosis may not be made for several weeks after onset, when complement giving antibodies develop, and by this time the patient is often back at work or is no longer under the care of a doctor. On the other hand, very few notifications were being received and it was obvious that the figures did not disclose the true incidence of the disease.

Apart from better notification, however, there is no doubt that there has been a real and significant increase in the number of cases of Q fever as is seen in Table XIII.

TABLE XIII

Showing Certain Particulars of Q Fever since 1954–55

Year	Notifications	Complement Fixation Tests		Total Serology Tests
		Positive	Performed	
1954–55 ..	22	70 (5)*	1,928	84,489
1955–56 ..	15	63 (6)	2,442	84,534
1956–57 ..	10	76 (2)	2,746	85,700
1957–58 ..	47	194 (7)	4,051	97,160
1958–59 ..	443	437 (27)	5,818	118,134

* Figures in parentheses indicate number of cases in this total from outside Queensland in total for year.

The number of positive tests obtained at the Laboratory of Microbiology and Pathology increased suddenly in 1957-58 and a further increase occurred last year. This increase was related neither to the number of complement fixation tests performed for Q fever nor to the number of specimens submitted to the Laboratory for serological tests. It could have been due to better selection by doctors but there is no evidence in favour of this. It is much more likely that there was an absolute increase in the number of cases occurring in the State.

Why did Q fever increase in 1957? Reasons for the increase must be largely speculative, but there have been two interesting developments since that time which could have contributed substantially to the increase.

The first of these is extension to the pastoral industry. Only two cases from the pastoral areas were diagnosed prior to January, 1958, when an outbreak occurred in a shearing shed at Tambo, between Charleville and Blackall. This was investigated by the Queensland Institute of Medical Research and the Laboratory of Microbiology and Pathology in conjunction with officers of the Department of Agriculture and Stock.

Subsequently agglutinins for *Coxiella burneti* were demonstrated in sheep, and complement fixing antibodies were shown to be present in kangaroos (both species) in Western Queensland. Finally direct isolations of *C. burneti* were made from a red kangaroo and also from kangaroo ticks (*Ambylomma triguttatum*), thereby suggesting a kangaroo-tick-kangaroo cycle and possibly a kangaroo-tick-sheep cycle also in this area. Further investigations are still being made but a long term plan of research should be carried out on a nation wide scale.

It is obvious that Q fever can exist wherever there are kangaroos, kangaroo ticks, and sheep and it is, therefore, essential—

(*a*) *That facilities for diagnosis of Q fever should be set up in other States.*

During the year, 27 interstate cases were diagnosed here—they came from New South Wales (Northern Rivers, Tenterfield, Broken Hill, and Newcastle) and this Department's Laboratory is now the only laboratory in Australia carrying out routine tests for Q fever. Many cases would be diagnosed in other States if the complement fixation test for Q fever was performed as a routine procedure on sera from fever patients.

(*b*) *That the geographic distribution, habits, and life cycle of Ambylomma triguttatum* should be carefully delineated.

(*c*) *That the habits and movements of kangaroos* should be known more precisely than at present.

These are researches which could best be carried out by some Commonwealth Authority because it is clear that Q fever is not confined to Queensland, nor do kangaroos observe State boundaries. An extensive campaign of banding kangaroos is indicated, together with a survey of ticks found on kangaroos in all parts of Australia.

Q fever is an important disease—not only industrially but also from the viewpoint of national economy and it is unfair and unrealistic to expect one State to carry the whole burden of research into it.

The second factor that could have been important in causing more human cases of Q fever has been the development of a trade with the United States in hamburger beef. Animals used for this trade, which is less than two years old, are usually aged and observers estimate that up to 80 per cent. of the cows slaughtered are pregnant. The organism of Q fever multiplies exceedingly in the placentas of cattle and it is easy to imagine how much more infectious these animals can be. For example, a meatworks near Brisbane was established only a year or so ago. It treated cattle for the hamburger trade, and many of the employees were new hands with no previous experience in the industry. They could, therefore, be presumed to be non-immune. From January to June, 1959, of the total staff of 110, no fewer than 58 were infected with Q fever. Others had lower antibody titres which were not diagnostic of active infection but which could have been due to subclinical infection. An intensive investigation was made into the sources of this outbreak but it is probable that the principal contributing cause was the number of pregnant animals which were slaughtered there. Other contributing causes such as defects in the processing plants have been largely overcome. Further cases of Q fever can be expected while this trade continues.

During the year all cases of Q fever were followed up by officers of this Department or by Local Authority inspectors. Of the 443 notified and accepted cases, complete data is available so far from 338, the remainder still being under investigation at 30th June. Some details of these cases are provided in Tables XIV., XV., and XVI. When classified by age, no fewer than 85 (25 per cent.) were lads under the age of 20 years; 151 (45 per cent.) were between 20 and 40 years of age; while 95 (28 per cent.) were between 40 and 60 years old. Of the 338 cases, 98 were not admitted to hospital and, therefore, could be presumed to be mild infections. 153 cases (45 per cent.) lived in the Greater Brisbane area; 90 (24 per cent.) lived in the Moreton statistical division which comprises the south-east corner of the State, while the remainder lived in 10 of the remaining 13 statistical divisions. Only 3 cases lived outside Queensland. When classified according to occupation and sex, it is seen that only 10 cases were females, usually on dairy farms. The meat industry contributed 235 cases (or 69·5 per cent of the total); the sheep and wool industry are represented by 49 cases (14·5 per cent.); while the dairy industry contributed 21 cases (6·2 per cent.). When arranged according to month of onset, the peak months are seen to be December to April, which coincides with activity in the meat trade and also with the shearing season.

TABLE XIV

Q FEVER SURVEY, 1958–59

Showing Months of Onset of Illness and Statistical Divisions where Patients Live

Statistical Division	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	Totals
Greater Brisbane ..	10	5	14	8	13	14	18	12	16	7	19	17	153
Moreton	2	2	..	5	1	7	5	15	12	16	14	1	80
Maryborough ..	2	..	..	1	..	..	1	..	1	..	..	..	5
Downs	2	4	1	5	2	3	4	1	..	2	1	1	26
Roma	..	..	..	..	..	3	1	5	3	..	..	..	12
South Western ..	1	2	..	1	..	2	1	2	1	..	..	..	10
Rockhampton ..	..	1	3	7	4	6	..	..	1	..	..	..	22
Central Western ..	..	1	1	1	..	3	4	3	..	..	..	..	13
Mackay	..	..	..	..	..	1	..	..	..	..	..	..	1
Far Western	..	..	..	..	..	..	..	..	..	..	..	..	..
Townsville	1	..	..	..	2	1	..	..	..	..	..	1	5
Cairns	1	..	2	..	..	1	2	..	1	..	..	1	8
Peninsula	..	..	..	..	..	..	..	..	..	..	..	..	..
North Western ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Outside Queensland	..	..	1	2	..	..	..	..	..	..	..	..	3
Totals ..	19	15	22	30	22	41	36	38	35	25	34	21	338
Variation from Expected Number ..	−9	−13	−6	+2	−6	+13	+8	+8	+7	−3	+6	−7	28

TABLE XV

Q FEVER SURVEY, 1958–59

Showing Occupation of Patients and Statistical Divisions Where They Live

Statistical Division	Sheep and Wool	Meat Industry	Dairying	Cattle	Other	Totals	Males	Females	Totals
Greater Brisbane	8	134	1	..	10	153	153	..	153
Moreton..	..	68	3	..	9	80	77	3	80
Maryborough	..	..	4	..	1	5	4	1	5
Downs	7	6	8	2	3	26	24	2	26
Roma	11	..	1	..	..	12	11	1	12
South Western	9	..	1	..	..	10	8	2	10
Rockhampton	..	20	1	1	..	22	22	..	22
Central Western	12	..	..	1	..	13	13	..	13
Far Western	..	..	..	..	..	..	..	..	..
Mackay	..	..	..	..	1	1	1	..	1
Townsville	..	2	..	..	3	5	4	1	5
Cairns	..	4	2	..	2	8	8	..	8
Peninsula	..	..	..	..	..	..	..	..	..
North Western	..	..	..	..	..	..	..	..	..
Outside Queensland	2	1	..	..	..	3	3	..	3
Totals	49	235	21	4	29	338	328	10	338
Percentages	14·5	69·5	6·2	1·2	8·6	..	..	..	100·0

TABLE XVI

Q FEVER SURVEY, 1958–59

Showing Age Distribution of Cases and Statistical Divisions Where They Live and Whether Admitted to Hospital or not

Statistical Division	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70 Years and Over	In Hospital	Not in Hospital	Totals
Greater Brisbane	..	43	33	31	24	17	4	1	105	48	153
Moreton	..	26	13	22	13	6	..	..	54	26	80
Maryborough	..	..	1	3	..	..	1	..	4	1	5
Downs	..	6	8	4	4	4	..	..	20	6	26
Roma	..	..	5	4	2	..	1	..	9	3	12
South Western	..	2	4	..	4	..	..	..	8	2	10
Rockhampton	..	6	4	6	3	3	..	..	18	4	22
Central Western	..	1	3	3	5	1	..	..	8	5	13
Far Western	..	..	..	..	..	..	..	..	..	..	..
Mackay	..	..	..	..	1	..	..	..	1	..	1
Townsville	..	..	..	3	1	1	..	..	4	1	5
Cairns	..	1	1	1	5	..	..	..	6	2	8
Peninsula	..	..	..	..	..	..	..	..	..	..	..
North Western	..	..	..	..	..	..	..	..	..	..	..
Outside Queensland	..	..	..	2	..	1	..	..	3	..	3
Totals	..	85	72	79	62	33	6	1	240	98	338
Percentages	..	25·1	21·3	23·4	18·3	9·8	1·8	0·3	..	..	100·0

RHEUMATIC FEVER

For the four years, 1954-55 to 1957-58 there were 760 notifications of rheumatic fever, of whom 40 per cent. were under the age of 10 years and a further 41 per cent. in persons between 10 and 20 years of age. Of the 221 patients notified in 1957-58, no fewer than 107 came from Toowoomba and district.

During 1958-59, 227 cases were diagnosed of whom 84 (41·2 per cent.) were under 10 years of age and 76 (33·5 per cent.) were between 10 and 20 years of age. Of the notified cases only 44 (19·4 per cent.) were from Toowoomba and district. One hundred and twenty cases (52·8 per cent.) were males and 107 (47·2 per cent.) were females.

The number of cases notified is still quite high but there are many fewer cases reported from Toowoomba. The occurrence of a large number of cases in Toowoomba caused some public alarm during the year and at my request two medical officers (Drs. Bryan Dowd and Helen Walsh) from the Institute of Child Health, Sydney, visited Toowoomba, in October, 1958, and examined about 40 notified cases. I am grateful to Professor Lorimer Dods for his kindness in permitting the visit of two such acknowledged experts on rheumatic fever. In the opinion of these specialists, about 13 of the 40 children examined satisfied the criteria for the diagnosis of rheumatic fever, 3 had other infections, and 24 had some type of febrile illness which they were unable to diagnose more precisely in the short time available. Certain features of the illness in these 24 children were suggestive of rheumatic fever but in the great majority there was no definite evidence of heart involvement. Patients had malaise, headache, pallor of the skin, sweating and slight fever. Arthralgia was commonly present.

The Queensland Institute of Medical Research later obtained blood samples from many of the affected children and also made fairly comprehensive epidemiological investigations. To date no specific diagnosis has been made. Sufficient to say that the illness, whatever its nature, does not appear to have crippling sequelae and all of the children ultimately return home.

SMALLPOX

Smallpox is endemic and frequently epidemic in many islands and countries just to the north of Australia's shores. Our population is almost completely unprotected against smallpox—in fact, we have the most unprotected and most exposed white population in the world. Vaccination against smallpox has almost been forgotten. We have been relying for protection on the excellent Commonwealth quarantine service.

Realising these risks, the National Health and Medical Research Council last year re-affirmed a previous recommendation that babies should be vaccinated in the first year of life and that persons who would normally come in contact with an introduced case of the disease, such as nurses, doctors, transport personnel, should also be vaccinated.

Accordingly, a circular has been sent to all public hospitals in this State requesting them to ensure immunity in hospital personnel by vaccination every three years. In March, 1959, all Local Authorities received from me a circular requesting them to make vaccination available to babies on the same terms as Triple Antigen. The response has been excellent. Although not all Local Authorities have replied, 73 cities, towns, and shires have commenced vaccination and others are no doubt doing so. Only three Local Authorities refused to vaccinate babies. One of those refusing was the Brisbane City Council which so frequently in the past has been an example to other Local Authorities in the prevention of disease in childhood.

Many Local Authorities have vaccinated all children, irrespective of age, and a few have vaccinated any person wanting it. As the number of children who were vaccinated in infancy increases, in ten years there should be a moderate reservoir of protected people in the population, and this should make it more difficult for smallpox to spread if it is ever introduced. In this era of rapid travel, the chances of a visitor spreading smallpox are greater than ever. In November, 1958, a German doctor left Ceylon by air and developed an influenza-like illness. He continued his journey to Switzerland, thence by rail to Heidelberg. Shortly after he arrived, 13 cases of smallpox were diagnosed. This could happen also in Australia and Local Authorities are asked to continue vaccinating babies and even children so that they all are given protection.

TETANUS

During the year 40 notifications were received, compared with 27 in 1957-58 and 37 in 1956-57. There is no decline evident in these figures but a shift in the age distribution of the notified cases this year may be significant. In previous years, when the ages of the notified cases were taken into account, about half of the cases (or rather more) were under the age of 15 years. This year, only 10 cases (25 per cent.) were in this age group. It seems that the widespread use of Triple Antigen, first introduced here in 1953, is having an effect in reducing the number of cases of tetanus in children. This is a trend which will be watched with interest. Of the 40 cases, 13 (46 per cent.) were over 40 years of age, and there were 15 cases in females. Tetanus is far too common in this State, and every person irrespective of age should be actively immunized against it. The disease carries a high mortality in spite of modern methods of treatment, and it is entirely preventable.

HANSEN'S DISEASE

(1) HANSEN'S DISEASE IN THE WHITE POPULATION

PEEL ISLAND

Medical Superintendent: M. H. GABRIEL, B.Sc., M.B., B.S., (Q'land), A.R.A.C.I.

This year has been quite an eventful one in the history of Hansen's disease in Queensland.

In August, 1958, I made a report on Hansen's disease incorporating my findings whilst overseas at Carville, United States of America, at the Leonard Wood Memorial Foundation in New York, at Hay Ling Chau Leprosarium, Hong Kong, and in Great Britain. As one result of this report and arrangements made overseas by me, two new drugs were obtained for the treatment of Hansen's disease—Ciba 1906 (also known as DPT) and Imperial Chemical Pharmaceutical's "Etisul" percutaneous. The other result of this report was the adoption of new conditions for the release of white patients from strict isolation. Since 1950, patients had been required to obtain twelve successive negative tissue smears taken at monthly intervals and to satisfy a medical board that the disease had been satisfactorily arrested before they could be released. I recommended that patients now be released after only three negative smears if they could satisfy the medical board. This recommendation was adopted and in September and October, 1958, six patients were released under these new conditions, and others have been released since then.

This report also recommended that Peel Island be abandoned as a leprosarium and that alternative accommodation be found at one of the Brisbane hospitals for the small number of patients remaining.

In November, 1958, the Medical Superintendent attended the VIIth International Congress of Leprology held in Tokyo, Japan, and presented a paper advocating abandonment of strict isolation of Hansen's disease sufferers, especially in the case of white patients and in other racial groups enjoying high standards of housing, sanitation and nutrition. The paper was very well received and many other papers were presented by other delegates advocating relaxation of the highly restrictive conditions under which Hansen's disease patients are now placed in many parts of the world.

The final reports of the Congress Committee on the Epidemiology and Control of Hansen's disease and of the Committee on Social Aspects were unequivocally in favour of the abandonment of strict segregation and other restrictive practices as currently applied to patients.

The Medical Superintendent also took the opportunity, whilst in the East, of making a visit to Hay Ling Chau Leprosarium at Hong Kong. This is an extremely efficiently conducted hospital and much valuable information was exchanged with the medical staff there.

A full report was submitted covering the VIIth International Congress of Leprology and many recommendations were made aimed at bringing the treatment and control of Hansen's disease in Queensland into line with current world trends.

Approval was given to liberalise the conditions of release from segregation and the procedure which is to be adopted will be as follows:—

1. All persons suffering from Hansen's disease should be notified to the Director-General as at present;
2. Every notified patient giving a positive smear should be compulsorily isolated in a hospital until such time as he has been stabilised on the drug of choice and educated into the method of spread and personal hygiene;
3. When this has been achieved, consideration be given as to whether the patient could not be discharged under conditions to be determined by the Director-General even though giving positive smears. Each case would be treated on its merits. For example, a patient would not be discharged to a home where young children would be exposed;
4. That Peel Island be abandoned as a place of isolation for patients suffering from Hansen's disease, when necessary arrangements as set out hereunder have been completed;
5. That an annexe be established in the grounds of one of the Brisbane hospitals for the treatment of—
    - (i.) All newly detected cases of Hansen's disease who would be admitted until such time as the Medical Officer in charge was of the opinion that they had been stabilised and educated into the condition;
    - (ii.) Patients transferred from home isolation for any condition which necessitated hospitalisation;
6. That an out-patients unit for the treatment of Hansen's disease be associated with the annexe;
7. That assistance be given to discharged patients as at present;
8. That the Director-General at all times have the power to order a patient to hospital even after discharge if he is not co-operating;
9. That patients should be kept under surveillance for a period of six years as at present;
10. That smears should be taken at approximately monthly intervals of patients giving positive smears until a negative smear is obtained and then for twelve months thereafter until twelve negative smears have been given, then as at present.

Arrangements were then put in hand for the establishment of an annexe—to be known as Ward S12—at the South Brisbane Hospital. At 30th June, the building operations were nearing completion and it is confidently expected that all remaining patients will be removed from Peel Island by the end of July, 1959.

TABLE XVII

Comparison of Statistics for the Financial Years 1956–57–58–59

—	1956–57			1957–58			1958–59		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Population at 1st July ..	16	5	21	14	6	20	14	5	19
Admitted	..	1	1	4	..	4	4	3	7
Discharged	2	..	2	3	1	4	6	5	11
Died	..	..	..	1	..	1	1	..	1
Population at 30th June ..	14	6	*20	14	5	†19	11	3	†14
Increase	..	1	..	..	..	..	..	..	..
Decrease	2	..	1	..	1	1	3	2	5

* This total includes 2 patients given special permission to remain in the institution although eligible for discharge.

† These totals include 3 patients as above.

Admissions

This year two male patients and one female patient were admitted for the first time. Two of these patients showed moderate advancement of the disease and one showed fairly considerable advancement since in this case a diagnosis of von Recklinghausen's disease had been made some years previously and no one had questioned this diagnosis and consequently the disease had gone unchecked. All three are making fair progress.

Of the two males and two females re-admitted, one female has had her disease arrested for many years but was allowed to return to the hospital since she is old, blind and crippled (a victim of the pre-sulphone era). One male patient was re-admitted after many years with a mild return of his disease. He had been receiving maintenance treatment with thiacetazone, which has been suspected for some time as not being the drug of choice for maintenance. He is responding well again on dapsone. One male and one female patient were re-admitted soon after their discharge under the new conditions because of exacerbations of their disease. The female patient has been discharged again and the male patient is making good progress.

Releases

Six males and five females were released during the year. Nine of these patients were releasd under the new conditions and with the exceptions mentioned above, all have remained bacteriologically negative and have shown no exacerbations of signs or symptoms.

Deaths

One male patient died at the age of sixty-six years from a toxic state indirectly due to his Hansen's disease. He had remained uncontrolled because of a marked intolerance to all of the drugs tried on him and an unwillingness to co-operate fully in his treatment.

Medical Treatment

Local experience is in line with the world-wide finding that the sulphones, and especially dapsone, are the most effective therapeutic agents against Hansen's disease yet discovered. Thiacetazone is a useful alternative drug, but, as indicated above, is not the drug of choice for maintenance treatment.

During my overseas tour I arranged for supplies of two new drugs and these came to hand in September and October, 1958. Ciba Limited, Basle, Switzerland, made available generous quantities of SU-1906 (also known as DPT) for therapeutic trial. In the short time since trials commenced, this drug appears to approximately equal dapsone in its effectiveness and has been remarkably free from side-effects.

The other drug "Etisul Percutaneous" which is applied to the skin in the form of a cream was made available in generous quantities by Imperial Chemical Industries (Pharmaceuticals Division), Cheshire, England. The results so far obtained with this drug are very encouraging and it is felt that its use in conjunction with an oral drug could lead to a material shortening of the time required to arrest Hansen's disease. Trials are continuing.

Occupational Therapy

Miss N. Ferrier, Superintendent of the Red Cross Handcrafts Section again gave generously of her time this year to instruct and assist patients in their occupational therapy. She made ten visits and arranged for supplies of materials for leather work, basket making, plastic crafts, &c.

Patients are also employed part time in woodworking, truck-driving, barbering, &c. Poultry-farming, which has been a very popular occupation with patients has declined this year as patients have reduced their flocks in anticipation of the abandonment of Peel Island as a hospital.

Specialist Services

Dentists from the Brisbane Dental Hospital made ten visits during the year to carry out a wide variety of dental work for the patients.

The official optometrist made one visit to examine patients and prescribe spectacles.

Again this year, patients were transferred for short periods to the Brisbane General Hospital for specialist medical and surgical treatment. Five patients made one visit and one patient was accommodated on two occasions.

The facilities of the Laboratory of Microbiology and Pathology were again made use of, 386 specimens being sent for examination, the details being:

TABLE XVIII

	Specimens
Venous blood for full blood count and ABO and Rh grouping ..	130
Blood for serological tests	3
Tissue smears for *M. Leprae* ..	135
Urine for chemical and microscopical tests	118
Total	386

One specimen of urine and one of hair were submitted to the Government Chemical Laboratory for arsenic estimation.

OFFICIAL VISITORS

The projected closure of Peel Island Hospital has necessitated many arrangements being made with respect to the patients, staff, building and equipment and the island itself. Visits by various officers have, therefore, been made to Peel Island to arrange for or assist in various matters in this connection. Mr. J. A. Holt, Co-ordinator-General, visited the island to investigate whether future plans for Peel could be included in development plans for North Stradbroke Island or what future development was likely or possible. Mr. C. Roff of the Department of Agriculture and Stock investigated the present position and future status of the island as a flora and fauna reserve. Dr. O. Powell and Messrs. N. Clark (Engineer) and W. J. Richards (Administration Officer) inspected the present arrangements for housing patients and assessed requirements at South Brisbane Hospital.

MEDICAL STUDENTS

Several groups of medical students again visited Peel Island to gain clinical experience of Hansen's disease.

GENERAL

The staff remained the same in numbers and categories as in previous years. Grounds and buildings have been kept in good order and much attention has had to be given to the roads on account of the wet weather. The launch service has continued to be highly satisfactory as in previous years. Patients continue to receive considerable numbers of visitors and this is a big factor in mantaining their cheerfulness.

The clergy have visited regularly and the Salvation Army have continued their quarterly visits which included a Christmas visit and distribution of gifts. The Sisters of Mercy from the Mater Misericordiae Hospital in Brisbane also distributed gifts at Christmas time and made another visit in June. The Toowong Sub-Branch of the R.S.S.A.I.L.A. conducted a Christmas party and again remembered their comrades at Peel Island on Anzac Day by conducting a service.

The year has been a busy and eventful one for the Medical Superintendent since, in addition to the numerous arrangements to be made in connection with the forthcoming shift of patients to the mainland, he has carried out several other activities. In September, 1958, he visited Mona Mona and Yarrabah Missions, Palm and Fantome Islands in connection with Hansen's disease in coloured persons. In November, he visited Hay Ling Chau Leprosarium in Hong Kong and attended the VIIth International Congress of Leprology in Tokyo, Japan. Since the end of February, 1959, he has spent most of his time in Brisbane combining with his supervision of Peel Island, the duties of Health Officer and since the departure of Dr. Rathus overseas on a study tour, he has assumed the duties of Director of Industrial Medicine.

In general, the year has been successful, closing with only eleven active cases in hospital, all of whom are making good progress towards recovery. The patients are anxiously awaiting the shift to the mainland early in the new financial year.

(2) HANSEN'S DISEASE IN THE ABORIGINAL POPULATION

Table XIX. set out below shows the statistics of aboriginal patients with Hansen's disease during the year.

TABLE XIX

—	Males	Females	Totals
Inpatients at 1st July, 1958	20	6	26
Admitted	5	2	7
Discharged	7	2	9
Died	..	1	1
Remaining 30th June, 1959	18	5	23

Of the seven admissions, five were admitted for the first time, one female patient, although an arrested case, was allowed re-admission because of her disabilities and one male patient was re-admitted following a severe drug reaction with an exacerbation of his disease. All nine of the discharged patients were well and in good physical condition. One female patient died in the Townsville General Hospital.

The numbers of aboriginal patients has remained at the present low figure for the past few years since the discharge rate is keeping pace with a gradually declining intake of new cases. The cases are being detected relatively early and can, therefore, be discharged with little or no residual disability.

Now that the numbers of patients are small, each patient can have an individual room or cottage if he chooses and this has given many of them an incentive to take a pride in their surroundings with beneficial effects on morale generally.

The weekly picture show continues to be extremely popular and many of the patients occupy themselves with handcrafts of various kinds. The nuns of the Order of Franciscan Missionaries of Mary have paid just as much attention to teaching the women patients needle work and other crafts as they have to the nursing and general care of the patients. The white officer, Mr. Tessmah, has devoted much of his spare time to teaching male patients woodwork and tinsmithing and other useful crafts.

Although the patients numbers are small they made a very creditable showing at their annual show of work. As well as the excellent needlework, woodwork and tin-smithing already referred to, the patients displayed excellent collections of polished shells, mounted coral, native craft work such as spears, boomerangs, fire-sticks, shields, woomeras, and even gunyahs. Garden produce and fruit were also exhibited. The spirit of competition at these shows is very real and provides the patients with an outlet for their energies both physical and mental.

This year the grounds and buildings have all been renovated and repainted and the whole institution is a credit to those in charge.

SECTION OF ENTHETIC DISEASES

Medical Officer in Charge: Geoffrey Hayes, M.B., Ch.M. (Syd.)

Medical Officer: Beatrice Warner, M.B., B.S. (Melb.)

There has been a slight overall decrease in the notified incidence of notifiable forms of Venereal Disease during the financial year 1958-59, there being 965 cases as compared with 1,018 in the previous year, an incidence of ·676 per 1,000 population.

The following table gives a dissection of these figures:—

TABLE XX

Notified Venereal Disease in Queensland, 1958–59

—	Metropolitan		Outside Centres		Whole State		Total
	Males	Females	Males	Females	Males	Females	
Gonorrhoea—							
Unspecified	3	2	20	8	23	10	33
Acute	452	67	117	26	569	93	662
Sub-acute	1	0	8	8	9	8	17
Chronic	1	9	17	69	18	78	96
Ophthalmia	0	0	1	2	1	2	3
Vulvo-vaginitis	0	1	0	1	0	2	2
	457	79	163	114	620	193	813
Syphilis—							
Unspecified	0	2	1	0	1	2	3
Primary	18	1	7	2	25	3	28
Secondary	2	3	1	2	3	5	8
Tertiary	3	1	2	3	5	4	9
Latent	4	0	0	0	4	0	4
Neuro	6	1	0	0	6	1	7
Pre-natal (congenital) ..	..	..	..	..	..	..	..
	33	8	11	7	44	15	59
Soft sore	3	0	0	0	3	0	3
Venereal warts	88	0	1	0	89	0	89
Ulcerative granuloma ..	0	0	1	0	1	0	1
	581	87	176	121	757	208	965
	668		297		965		
	965						

It is worth noting that there was no case of Pre-Natal (Congenital) Syphilis notified.

In Table 1, are shown the notifications from centres outside Brisbane, and the point to note is the big increase in notifications from North Queensland–Thursday Island 160 (60 in the previous year), Townsville 28 (17 previous year).

In 1951 there were virtually no notifications from Thursday Island and when this was pointed out, increased vigilance and attention to notifications resulted in a substantial increase in notifications, but this year the figures from Thursday Island (160) are more than double those for last year and represent an all-time high.

If these figures represent the true state of venereal disease incidence in Thursday Island, then it should be a matter for no little concern and makes one wonder whether the figures from other parts of the State are a true index. Treatment is now so relatively simple and so rapidly effective that some doctors overlook notification.

TABLE XXI

CENTRES OF NOTIFICATION OF VENEREAL DISEASE OUTSIDE METROPOLIS

Centre	Males	Females	Total
Atherton	1	..	1
Ayr	6	2	8
Babinda	2	..	2
Blackall	1	..	1
Bundaberg	1	2	3
Cairns	13	3	16
Charleville	1	..	1
Charters Towers	2	2	4
Cloncurry	2	2	4
Coolangatta	1	..	1
Cunnamulla	4	..	4
Gordonvale	3	..	3
Gympie	2	..	2
Ipswich	2	..	2
Ingham	1	..	1
Inglewood	1	..	1
Kingaroy	1	2	3
Longreach	5	..	5
Mackay	13	3	16
Mareeba	1	1	2
Mossman	1	..	1
Mount Isa	1	..	1
Murgon	3	2	5
Nambour	5	..	5
Palm Island	5	2	7
Proserpine	1	..	1
Rockhampton	5	..	5
Southport	..	1	1
Thursday Island	69	91	160
Townsville	20	8	28
Torquay	1	..	1
Tully	1	..	1
Wondai	1	..	1
Total	176	121	297

Table XXII. shows the incidence since 1938, through the War years to date and suggests that the trend of recent years to a slight resurgence is being arrested:—

TABLE XXII

SHOWING NUMBER OF NOTIFICATIONS OF VENEREAL DISEASES FOR PAST 20 YEARS

Fiscal Year	Notifications	Mean Population	Incidence per 1,000 Population
1938–39	1,147	1,008,207	1·127
1939–40	1,091	1,021,426	1·077
1940–41	1,328	1,032,122	1·286
1941–42	1,207	1,036,690	1·164
1942–43	3,101	1,040,433	2·98
1943–44	2,718	1,054,810	2·576
1944–45	2,391	1,068,630	2·24
1945–46	1,309	1,084,125	1·207
1946–47	1,373	1,097,303	1·251
1947–48	1,000	1,114,634	·897
1948–49	846	1,140,816	·742
1949–50	731	1,173,232	·623
1950–51	626	1,207,194	·519
1951–52	627	1,239,868	·506
1952–53	757	1,272,244	·595
1953–54	740	1,300,464	·569
1954–55	741	1,325,336	·559
1955–56	807	1,352,650	·597
1956–57	995	1,380,700*r*	·721
1957–58	1,018	1,403,400	·726
1958–59	965	1,426,100	·676

(*r*) Subject to revision.

Tables XXIII., XXIV. and XXV., showing sources of infection, marital status, and age groups of notified cases, are self-explanatory:—

TABLE XXIII.

SHOWING SOURCES OF INFECTION

Non-Professional	681
Not stated	174
Unknown	48
Professional	43
Wife	8
Husband	8
Mother	3
	965

TABLE XXIV

MARITAL STATUS OF PATIENTS

——	Males	Females	Total
Married	133	80	213
Single	596	72	668
Separated	11	8	19
Widowed	13	7	20
Divorced	..	3	3
Not Stated	4	38	42
	757	208	965

TABLE XXV

SHOWING AGE GROUPS OF NOTIFIED CASES—1958–1959

Age Group	Males	Females	Total
Under 1 year	..	..	..
1–5 years	1	3	4
6–10 years	..	..	..
11–15 years	1	2	3
16–20 years	154	40	194
21–25 years	181	51	232
26–30 years	129	27	156
31–35 years	109	19	128
36–40 years	80	8	88
41–45 years	48	10	58
46–50 years	15	5	20
51–55 years	9	..	9
56–60 years	11	1	12
61–65 years	3	1	4
Over 65 years	7	..	7
Unknown	1	4	5
Not Stated	8	37	45
	757	208	965

Table XXVI. shows the sources of notification—7·6 per cent. from private doctors (7·3 per cent. in the previous year), the bulk of notifications coming, as usual, from the clinics and public hospitals:—

TABLE XXVI

SHOWING SOURCES OF NOTIFICATION

——	Males	Females	Total
Private Doctors—			
Brisbane	20	1	21
Outside Centres	43	10	53
Total	63	11	74
Clinics—			
Brisbane	549	82	631
Outside Centres	18	5	23
Total	567	87	654
Hospitals—			
Brisbane	12	4	16
Outside Centres	115	106	221
Total	127	110	237
Total all sources	757	208	965

AD HOC CLINICS—BRISBANE

In Brisbane the Department maintains two Clinics for the treatment of genito-infectious diseases—including the venereal diseases. The Male Clinic is in South Brisbane and the Female Clinic in the City adjacent to the Department's headquarters.

Male Clinic—Colchester Street—Summary of Activities 1958-59

New Cases—	
Total for Year	1,319
Highest Month—January	131
Lowest Month—July	77
Visits—	
Total for Year	10,827
Highest Month—January and June equal with	1,008
Lowest Month—May	738
Notifications—	
Early Syphilis—	
Primary	17
Early latent	3
Total	20
Late Syphilis—	
Late secondary	1
Late latent	..
Tertiary	..
Total	1
Acute Gonorrhoea	437
Venereal Warts	88
Soft Sore (Chancroid)	3
Total	549
Injections—	
Bismuth	7
Penicillin	671
Investigations—	
Darkground tests	25
Smears examined at Clinic	4,570
Smears submitted to Laboratory	750
Blood tests submitted to Laboratory	1,644

This clinic is the only place where practical instruction can be given to medical students and so has a twofold importance—(1) as a curative centre, and (2) as a medical educational centre where the future practitioners of the State can be instructed so that they enter practice with some knowledge of the subject.

This latter activity is very definitely preventive medicine and most properly a function of the Health Department. Future standards of diagnosis in the State will depend upon the extent to which this part of the Clinic's activity is developed.

Female Clinic—William Street, City

This clinic has a threefold function—

(1) Treatment of patients.

(2) Periodic examination of certain known prostitutes and treatment if necessary.

(3) Examination for Venereal Diseases of prisoners in female wing of H.M. Prison.

Notifications from these three (3) sources totalled 81 made up as follows:—

Acute Gonorrhoea	66
Chronic Gonorrhoea	9
Treated Gonorrhoea	1
	76
Primary Syphilis	1
Secondary Syphilis	2
Treated Syphilis	2
	5

The various contributions are dissected in the Table below:—

—	Women's Clinic	Examination of Prostitutes	Examination of Prisoners	Total
Acute Gonorrhoea	31	29	6	66
Chronic Gonorrhoea	7	..	2	9
Treated Gonorrhoea	1	..	..	1
Primary Syphilis	1	..	..	1
Secondary Syphilis	0	..	2	2
Treated Syphilis	2	..	..	2
Total	42	29	10	81

Activities for the fiscal year are summarised as follows:—

Women's Clinic—	
Total interviews	350
New cases	162
Penicillin injections	93
Smears taken	478
Cultures taken (representing 190 patients)	467
Bloods taken for S/T Sy.	180
Examination of Prostitutes—	
Total examinations	2,228
Smears taken	2,528
Bloods taken for S/T Sy.	130

SECTION OF AIR POLLUTION CONTROL

Although man is undoubtedly as entitled to pure air as to pure food and water, the rapid industrialization of cities has caught most Health Departments unawares until recent years. The proper time to plan control of air pollution, of course, is when it has not yet become a health problem, or at most a relatively minor one compared with other cities which are already well established industrially.

Air pollution probably antedates the discovery of fire by man. Volcanoes and hot springs emitted sulphur fumes which made animal life impossible within a certain zone depending on the prevailing winds and weather. These caused little inconvenience to primitive man who could move out of the toxic region. Modern air pollution is more serious in that it is worst in the most densely populated areas. Therefore, large numbers are exposed to any hazard which may be contained in the various aerial contaminants, and air pollution becomes a problem when deleterious effects on health and wellbeing can be demonstrated. Much research work is being carried on to determine the effects of certain aerial contaminants on human beings, but several substances are known to be injurious.

A fairly complete definition of air pollution is "the presence in the outdoor atmosphere of one or more contaminants, such as dust, fumes, gas, mist, odour, vapour, or smoke, in quantities, of characteristics, and of duration such as to be injurious to human, plant, or animal life and property, or which unreasonably interferes with the comfortable enjoyment of life and property". (U.S.A. Joint Engineers Council.)

By and large, the air of cities was accepted with resignation by the citizens. It was one of the handicaps of urban life, and was inevitable. It had no health significance and its importance was primarily economic. These concepts received a series of setbacks when "incidents" involving thousands of people occurred less than twenty years ago.

Perhaps the most notable of these has come to be known as the London Smog episode of December, 1952. Here a typical London "pea souper" with inversion lasted for five days, with rapid increase in air pollution because of the absence of wind to carry it away. During this period 4,000 people died, chiefly the aged and infirm and those with respiratory disease.

Another "incident" occurred at Donora in Pennsylvania during 1948. This is an industrial town 13 miles south of Pittsburgh. During an inversion when the air was particularly calm from 27th to 31st October, 1948, there was a rapid accummulation of air pollution, twenty people died and several thousand people became ill.

As in the London Smog of 1952 the causal agent was never identified but it was thought to be due to various types of sulphur compounds present in the air. Sulphur dioxide is produced from smelting operations, from chemical plants, oil refineries, power plants, and even from motor fuels.

Other incidents have been reported before and since but the most publicised problem exists in Los Angeles where meteorological conditions in the 1,600 square mile area of Greater Los Angeles result in frequent inversions. The noxious agents occur with misty still conditions and produce coughing and irritation of the eyes. One of the chief contributors to pollution in Los Angeles is believed to be the large number of cars. Indeed, some Californians claim that the City of the Angels is no longer fit for human beings and should be given back to the Indians.

It is obvious that the air can contain foreign substances at any place and at all times but that atmospheric pollution occurs only when an excessive concentration adversely affects human health and wellbeing or causes damage to property or to plant and animal life. A number of substances can be responsible besides carbon and coal dust. There is ash and grit in the air and some of the other contaminants are sulphur compounds especially sulphur dioxide, sulphuric acid mist and hydrogen sulphide. In certain places, toxic fluorine compounds can be released. Carbon monoxide, chlorine, hydrochloric acid, carbon dioxide, nitrous oxides, ammonia, ozone, and various hydrocarbon breakdown products can be thrown into the air by industry. Some of the compounds have not been adequately studied and their effects are not completely understood.

The degree of atmospheric pollution is greatly influenced by the weather and by the topography of a city area. Rain clears the air. Winds blow polluted air out of an area and make it diffuse and descend great distances away from the source. Turbulence in the air causes rapid dispersion whereas a smooth horizontal airflow can disperse the contaminants along the ground for a great distance. Vertical updraughts of air are very valuable.

Normally the temperature of the air decreases with altitude but occasionally it increases and this is said to be an inversion of temperature. It often exists in the air immediately above the earth's surface but it can occur in a layer of the free air thousands of feet above ground level. Inversions are associated with still air and rapid accumulation of contaminating substances must therefore occur.

In the Greater Brisbane area the problem of air pollution is not believed to be a major one but it was felt that measurements and analysis of fallout should be made together with recordings of smoke so that the need for control measures could be determined. Accordingly an Air Pollution Committee was set up by the Minister in the first half of 1958 and it was decided that the survey should be carried out in Brisbane and Ipswich. Special equipment was provided and the survey commenced on 1st March, 1959. Details of this interesting work will be found in the report of the Government Chemical Laboratory.

The survey will continue for a year and then decisions must be reached as to what further work needs to be done and what control measures are required. When the survey is over it seems likely that the principal sources of pollution will need to be pinpointed and records of smoke emission made and photographed.

At the present time there is little power to control or prevent air pollution but the Government intends to introduce an amendment of the Health Acts which will enable control measures to be instituted should they be required. It will be advisable in future to site certain industry and power houses where they can make the least contribution to air pollution in a particular urban area.

SECTION OF FOOD AND DRUGS

This section is charged with the implementation of the food and drugs sections of the Health Acts, the Food and Drug Regulations, the Milksellers' Regulations, the Health (Food Supply) Regulations, the Poisons Regulations and the Health (Insecticide) Regulations. The wide variety of work entailed in the implementation of the above law has meant a busy and interesting year for the staff. It is not possible in this report to give all details of the work performed during the year by this section and it is proposed to deal with the major aspects of the year's work.

Milk and Milk Products

Close attention has been paid to this important article of the public diet not only in the metropolis but also in the rest of the State. This has involved inspections of milk pasteurising factories, milk bottling factories, sampling of milk at factories, and at points of sale to the public and inspections of distribution depots and delivery vehicles. Wherever action has been found necessary to correct faults, the necessary action was successfully taken. It is pleasing to note that a milk bottling plant is now successfully operating at Mount Isa, whilst our Townsville office reports an extension to further towns in the north-west of the scheme whereby milk, which has been previously pasteurised, is delivered to residents in these areas. Our Rockhampton office reports a similar extension of the scheme in the central west. Apart from the provision of safe supplies of milk to the general public, these schemes, which now operate in the south-west, the central west and the north-west, have been the means of further extending the areas to which it is possible to implement the free milk distribution to school children. An interesting survey of raw milks was undertaken in the Cairns area from the view-point of possible tubercular contamination. It is pleasing to report that all milks were found to be free of the organism.

Regular inspections and sampling of products were carried out at all factories and bottling plants in the State and instructions given to correct faults detected. Prompt compliance with these instructions resulted in the desired improvement and this is a pleasing reflex of the co-operation this department enjoys with the trade.

An increased number of samples of milk was obtained during the year and these are dealt with more fully in the section of the Government Chemical Laboratory. However, as the result of such sampling operations, it was found necessary to prosecute certain offenders and ten prosecutions were successfully launched during the year, resulting in the inflicting of fines of £153 and costs of £25 4s. Details of these prosecutions are shown in Table XXVII.

Close attention has been paid to the quality of ice cream during the year and many samples were taken to ensure compliance with both chemical and bacteriological standards, whilst regular checks on butter on the State's markets were made. Information from the analyses of butter has been forwarded to the controlling department for necessary corrective action at the factories.

TABLE XXVII

Prosecutions for Adulterated Milk—1958–59

Date	Place	Basis of Prosecutions	Fines	Costs
1958—			£ s. d.	£ s. d.
28th July	Hughenden	Excess water— 6 per cent. ..	6 0 0	0 14 0
19th August	Murgon	Excess water—18 per cent. ..	18 0 0	2 16 0
4th September ..	Mount Isa	Excess water—13 per cent. ..	13 0 0	1 15 0
7th October	Rockhampton	Excess water—45 per cent. ..	20 0 0	2 16 0
9th October	Home Hill	Excess water—78 per cent. ..	20 0 0	3 3 0
24th October	Mount Isa	Excess water—17 per cent. ..	20 0 0	2 16 0
17th December	Wellington Point ..	Excess water—13 per cent. ..	15 0 0	2 16 0
1959—				
6th January	Townsville	Excess water—12 per cent. ..	15 0 0	2 16 0
6th January	Townsville	Excess water—10 per cent. ..	10 0 0	2 16 0
27th May	Surat	Excess water—16 per cent. ..	16 0 0	2 16 0
		Totals	153 0 0	25 4 0

Preservative in Minced Meat, &c.

Despite a continual campaign against this offence, it is regretted that there are still many butchers who are prepared to break the law. As a result of departmental activities, there were thirty-three successful prosecutions launched during the year, resulting in a total of £179 16s. in fines and £94 10s. in costs (see Table XXVIII. for details), whilst severe warnings were given to several butchers who had small proportions of preservative in their minced meat.

Although a proportion of preservative, which is considered rational, is allowed in sausages and sausage meats, seven butchers were found to be exceeding this proportion in various degrees and were successfully prosecuted for the offences, such prosecutions resulting in the securing of £49 10s. in fines and £19 12s. in costs. Details of these prosecutions are shown in Table XXIX.

TABLE XXVIII

PROSECUTIONS FOR ADULTERATED MINCED MEAT—1958–59

Date	Place	Basis of Prosecution	Fines	Costs
1958—			£ s. d.	£ s. d.
2nd July	Brisbane	Preservative added	5 6 0	2 16 0
2nd July	Brisbane	Preservative added	1 4 0	2 16 0
4th August	Toowoomba	Preservative added	3 0 0	2 16 0
6th August	Brisbane	Preservative added	3 0 0	5 19 0
28th August	Brisbane	Preservative added	7 10 0	2 16 0
25th September	Mareeba	Preservative added	2 0 0	3 10 0
21st October	Innisfail	Preservative added	3 0 0	2 16 0
19th November	Brisbane	Preservative added	3 0 0	2 16 0
19th November	Brisbane	Preservative added	12 0 0	2 16 0
19th November	Brisbane	Preservative added	10 0 0	2 16 0
19th November	Brisbane	Preservative added	5 0 0	2 16 0
26th November	Brisbane	Preservative added	20 0 0	2 16 0
26th November	Brisbane	Preservative added	10 0 0	2 16 0
3rd December	Brisbane	Preservative added	7 10 0	1 1 0
17th December	Brisbane	Preservative added	3 0 0	2 16 0
17th December	Brisbane	Preservative added	3 0 0	2 16 0
17th December	Brisbane	Preservative added	5 0 0	2 16 0
1959—				
19th January	Nobby	Preservative added	3 0 0	2 16 0
20th January	Brisbane	Preservative added	3 0 0	2 16 0
27th January	Brisbane	Preservative added	3 0 0	2 16 0
27th January	Brisbane	Preservative added	5 0 0	2 16 0
29th January	Brisbane	Preservative added	2 6 0	2 16 0
10th February	Dalby	Preservative added	5 0 0	2 16 0
10th February	Dalby	Preservative added	5 0 0	2 16 0
5th May	Warwick	Preservative added	10 0 0	2 16 0
5th May	Warwick	Preservative added	6 0 0	2 16 0
5th May	Warwick	Preservative added	4 0 0	2 16 0
5th May	Warwick	Preservative added	4 0 0	2 16 0
9th June	Dalby	Preservative added	5 0 0	2 16 0
9th June	Dalby	Preservative added	5 0 0	2 16 0
9th June	Dalby	Preservative added	5 0 0	2 16 0
19th June	Pittsworth	Preservative added	6 0 0	2 16 0
29th June	Roma	Preservative added	5 0 0	2 16 0
		Totals	179 16 0	94 10 0

TABLE XXIX

PROSECUTIONS FOR ADULTERATED SAUSAGES—1958–59

Date	Place	Basis of Prosecution	Fines	Costs
1958—			£ s. d.	£ s. d.
3rd December	Brisbane	Excess preservative	7 10 0	0 14 0
17th December	Brisbane	Excess preservative	5 0 0	2 16 0
17th December	Brisbane	Excess preservative	5 0 0	2 16 0
1959—				
27th January	Brisbane	Excess preservative	4 0 0	2 16 0
5th May	Warwick	Excess preservative	17 0 0	2 16 0
5th May	Warwick	Excess preservative	5 0 0	4 18 0
19th June	Pittsworth	Excess preservative	6 0 0	2 16 0
		Totals	49 10 0	19 12 0

BREAD, FLOUR, &C.

Very many samples of bread were obtained from bakers with a view to ascertaining compliance with the standards for the respective types of bread. Particularly was this so in respect of "protein-enriched" breads, which are now firmly established in the local markets. In the main such breads were found to be meeting the standard laid down by the law. Flour samples have been regularly obtained from millers to ensure their quality. Details of samples may be found in the section of the Government Chemical Laboratory.

HOTELS, LIQUOR TESTING, GLASS-WASHING, &C.

Officers of this section have consistently tested the quality of spirituous liquors offered for sale by hotel licensees, and, as a result of such operations, one licensee was successfully prosecuted for two breaches of the law, with total fines of £25 and costs of £5 12s. Details are shown in Table XXX. Due to a technicality, charges against another licensee were not proceeded with.

The provision of mechanical glass-washing apparatus supplied with hot water for use in hotels and clubs has not been overlooked and wherever it has been found possible for such apparatus to be installed, the necessary action has been taken. In this regard, close liaison has been effected with the Licensing Commission and it is considered that there now very few licensed premises in the State, where the main requirements of power, water under pressure and satisfactory drainage permit the effective use of glass-washing machines, which are not provided with this amenity.

It is reported with regret that the Crown Appeal in what is now known as "the clean glass" case was dismissed by the Full Court. It is felt that the provision of a clean glass for each drink is a most desirable measure in the interests of the consumer. Generally, it was welcomed by the public and it is a pity that the absolving of a licensee, under certain conditions, from the full responsibility for the acts of his staff has resulted in difficulties in the implementation of this requirement. At present, this law is under review with the purpose of its being strengthened. It is most pleasing, however, to be able to report that, despite the verdict, there is a very large measure of compliance with this regulation by licensees.

TABLE XXX

Prosecutions for Adulterated Liquor—1958–59

Date	Place	Basis for Prosecution	Fines			Costs		
1959—			£	s.	d.	£	s.	d.
12th March ..	Muttaburra	Selling adulterated rum	10	0	0	2	16	0
12th March ..	Muttaburra	Selling adulterated rum	15	0	0	2	16	0
		Totals	25	0	0	5	12	0

SOFT DRINKS, &C.

Many hundreds of samples of fruit, fruit-flavoured and other soft drinks were submitted for analysis to determine not only their wholesomeness and quality but also the correctness of their description on the label. Action was taken to bring labelling breaches under the notice of packers and, where later check samples have been obtained, it was found that packers were making every effort to comply. Similar responses were met when failures to meet the required standards were brought under notice.

FRUIT PRODUCTS, JAMS, &C.

An interesting survey was carried out on a range of tinned fruits. Regulations provide for a specified content of fruit in canned fruits and it was found that manufacturers generally met the standard provided. Jams were not neglected in the survey and a comprehensive range of jams on the local market were found upon analysis, to meet the percentage fruit content provided by the regulations for jam.

FROZEN FOODS

There is an ever-increasing flow of these products on to the local market. The processing and freezing of certain foods, which are suitable for the purpose, and their hygienic packing for distribution to the public provide a most convenient and satisfactory method of selling food. However, such foods have a restricted life after thawing and it is necessary that they be handled at all times at very low temperatures. A State-wide survey of frozen foods was undertaken. This involved not only the securing of samples to check quality but also a complete investigation of methods of handling at the wholesale end, during transport and at the retail end. Although faults were found, it was also ascertained that manufacturers were very jealous of their products and were doing everything within their power to ensure that the public received a satisfactory product. Information to enable legislation of a practical nature to be formulated was obtained from these investigations. This is a matter which is receiving the attention of all States through the Uniform Food Standards Committee and it is confidently anticipated that satisfactory legislation on an Australia-wide basis will be recommended in the immediate future.

FISH, &C.

Inspectors at the Fish Market, South Brisbane, performed their usual efficient task of inspecting all fish offered for sale and, as a result of their inspections, a total quantity of 91 tons, 4 hundredweight, 1 quarter and 13 pounds of fish was condemned as unfit for human consumption and destroyed. In addition, 22 bottles of oysters, 19 mud and 1,708 sand crabs were similarly dealt with. Details of these condemnations can be found in Table XXXI. Periodically, visits of inspection have been paid by the officers to cafes and fish shops to ensure quality of fish.

Officers in country districts, particularly Townsville have condemned and destroyed unsound fish on the local markets, details of which are included in the Table of unsound foods (Table XXXII).

TABLE XXXI

Quantity of Fish Condemned and Destroyed at the Fish Markets, South Brisbane

Class of Fish	Weight			
	T.	C.	Q.	L.
Barramundi	0	1	3	2
Bass	0	0	0	21
Bream	8	6	0	26
Catfish	0	0	1	23
Cod	0	1	0	17
Chinaman Fish	0	2	2	12
Cuttlefish	0	0	3	26
Darts	0	0	1	25
Dory	0	0	0	27
Flathead	1	18	3	18
Garfish	0	5	0	23
Jewfish	0	0	1	17
Lobster	0	2	1	17
Long Tom	0	1	0	0
Mackerel	0	19	1	19
Miscellaneous	0	0	1	8
Mixed Fish	1	7	2	27
Mixed Fish (Reef)	0	0	3	13
Morwong	0	0	0	26
Mullet	70	0	0	25
Parrot	0	4	0	4
Perch	0	0	3	15
Pike	0	1	0	22
Prawns	1	9	2	22
Ray	0	3	0	11
Red Emperor	0	1	1	16
Salmon	0	4	0	17
Scallops	0	1	0	0
Schnapper	0	7	2	22
Shark	1	5	0	1
Sole	0	5	0	19
Squid	0	3	2	13
Squire	0	3	1	27
Sweetlip	1	9	0	8
Tailer	0	2	2	0
Tarwine	0	2	3	1
Trevally	0	4	1	8
Trout	0	2	3	21
Trumpeter	0	0	2	4
Tuna	0	0	3	15
Turrum	0	0	3	16
Whiting	0	18	0	5
Yellow Croaker	0	0	3	0
Yellowtail	0	0	1	18
Total	91	4	1	13

In addition, 22 bottles of oysters, 19 mud crabs and 1,708 sand crabs were condemned and destroyed during the year.

LABELLING

A firm insistence on a truthful description of food has always been a feature of this department's activities and this year has not seen a slackening of effort in that direction. Close co-operation with the trade ensures our advice being sought as to the correct labelling of new products whilst faults of existing labels are continually being corrected.

COMPLAINTS

All complaints received during the year have been attended to and all necessary action taken to secure correction. This has involved very many visits of inspection to food premises.

BACTERIOLOGICAL EXAMINATIONS, &C.

Much use has been made of the Laboratory of Microbiology and Pathology in the bacteriological examination of disinfectants, milk, oysters and other foods. Two interesting surveys were made during the year in respect of talc powders and coconut, whilst bacteriological examinations were made of many prepared foods with a view to ascertaining the cause of two outbreaks of food poisoning at institutions in South Brisbane and Ipswich.

SAMPLING GENERALLY

An increased number of unofficial check samples was obtained to ascertain quality of foods or correctness of labelling. Apart from the substances previously dealt with in this Report, the samples included confectionery, headache powders, tomato sauces, margarines, jelly crystals, meat extracts, manufactured meats, cake mixes, dried peas, cordial extracts, &c.

UNSOUND FOODS, &C.

Continual attention has been paid to the wholesomeness of foods, &c., sold not only by warehouses and retail stores, but also at auction marts. As the result of the departmental activities over 62 tons of foodstuffs were found to be unfit for human consumption and effectively disposed of. Half this total was accounted for by a consignment of dates, which were found to be heavily infested with vermin. Details of the foods found unfit for human consumption can be found in Table XXXII.

TABLE XXXII

PARTICULARS OF UNSOUND FOODS DESTROYED
1958–1959

Food	Weight				
	T.	C.	Q.	L.	O.
Biscuits	0	4	2	11	0
Breakfast foods	0	1	2	14	8
Cakes and cake mixtures	0	0	3	17	12
Cheese	0	0	0	22	0
Cocoa	0	0	0	15	0
Coconut	0	13	1	0	0
Coffee	0	0	0	14	0
Cordials	0	1	1	14	0
Cream of tartar, &c.	0	0	1	20	0
Custard powder	0	0	0	20	0
Dates	31	11	3	14	0
Fish—Barramundi	0	0	2	23	0
Cutlets (green)	0	7	2	18	0
Hake	0	4	3	8	0
King	0	0	0	23	0
Mackerel	2	1	0	7	0
Miscellaneous	0	0	0	24	0
Mullet	1	10	1	26	0
Prawns	0	18	2	26	0
Salmon	0	6	3	26	0
Spotted Ray	0	1	0	19	0
Sweetlip	0	2	2	18	0
Trevally	0	3	2	6	0
Turrum	0	2	3	0	0
Fish, tinned	0	12	1	0	12
Flour	0	0	3	25	0
Fruit, fresh	5	10	1	10	0
Fruit, tinned	4	9	2	19	2
Ham loaf	0	0	0	18	0
Honey	0	0	2	5	0
Jams	0	7	0	25	1
Margarine	0	0	0	21	0
Meat, manufactured	0	1	0	23	0
Meat, tinned	0	4	0	1	12
Milk, condensed, &c.	0	5	0	2	0
Miscellaneous	0	0	2	7	14
Oils, edible	0	0	0	23	0
Olives	0	0	3	26	0
Pepper	0	4	1	4	0
Pickles	0	3	0	0	4
Puddings	0	1	0	26	0
Sauces	0	0	0	26	0
Soups, tinned	0	3	1	24	0
Spreads	0	0	1	5	0
Sugar	0	1	1	0	0
Tomato paste	0	0	1	26	0
Vegetables, fresh	7	7	2	19	0
Vegetables, frozen	0	0	0	27	6
Vegetables, tinned	3	15	3	6	8
Yeast	0	0	0	18	0
Totals	62	7	0	19	15

In addition, 38 cartons of chewing gum, 19 lbs. of effervescent saline and 468 bottles of mixed wines were found unfit for human consumption, whilst 646 crabs were also condemned and destroyed.

CAFE REGULATIONS AND HEALTH (FOOD HYGIENE) REGULATIONS

These regulations are administered by the local authorities and periodical checks are made by departmental officers as to conditions operating at the premises coming within the scope of these Regulations. Where faults have been detected, they have been brought to the attention of the local authority concerned, generally with the desired corrective action being taken. There appears to be a full appreciation by local authorities of their responsibilities under these regulations.

Miscellaneous Prosecutions

Five persons were successfully prosecuted for miscellaneous breaches of the law during the year and, as a result, fines totalling £28, with costs of £9 16s. were obtained. Details of these prosecutions may be found in Table XXXIII.

TABLE XXXIII

Miscellaneous Prosecutions—1958–59

Date	Place	Basis of Prosecution	Fines	Costs
			£ s. d.	£ s. d.
1958—				
26th August	Brisbane	Selling adulterated honey	5 0 0	2 16 0
17th October	Home Hill	Food not correctly labelled	5 0 0	0 14 0
1959—				
8th April	Cairns	Cockroach in ice block	3 0 0	0 14 0
23rd April	Ayr	Not denaturing waste beer	10 0 0	2 16 0
29th June	Roma	Excess preservative in meat product	5 0 0	2 16 0
		Totals	28 0 0	9 16 0

Poisons and Drugs

During the year under review, a new set of Poisons Regulations was gazetted. For some time past, conferences have been held between representatives of the States, under the auspices of the National Health and Medical Research Council, for the purpose of securing uniform schedules of poisons and uniform labelling and packing requirements. It is anticipated that their adoption will prove of much value both to the trade and to administration. The proposed scheme provides for eight schedules and it was on this basis that our new regulations were made. It was a fairly radical departure from our existing law and its implementation has entailed a very great deal of work by this section. It was expected that some considerable time would elapse before all firms were complying with the new labelling requirements. It is very pleasing to report that progress has been much faster than was anticipated, and there is an ever-increasing flow of poisons on to the market, labelled in conformity with the new regulations. It is also pleasing to report the complete co-operation of the trade in this regard.

Dispensed Medicines

A range of medicines was obtained on prescriptions and submitted to the analyst to determine accuracy of dispensing by chemists. Where faults were detected, the necessary corrective action was taken. Though none of the faults was of a serious nature, the results indicated that such surveys should be a regular feature of this section's work and they will continue.

Proprietary Medicines

These lines are continually under review, both as to their composition and the advertising claims. Restrictive legislation in this regard has the effect of keeping claims within the realms of moderation. Without this restrictive legislation, there could be a temptation for packers to "bang the big drum" about the virtues of their products.

Pencils, Pastels, &c.

Many samples of pencils, pastels, crayons, &c., were analysed. Queensland law prohibits the presence of any poison in such lines and steps are continually taken to prevent the sale of offending lines. It has been found that the use of poisonous substances is not necessary in these products and the position in this State may now be regarded as excellent in this regard.

Inspections, &c.

The staff has paid very close attention to all aspects of the poison trade and this has involved innumerable visits of inspection to wholesale dealers in poisons and drugs, retail licensees, chemists, hospitals, doctors, veterinary surgeons—in fact, to every person who handles poisons for sale and to every person subject to the restrictions of the Poisons Regulations in regard to dangerous and restricted drugs. The work has been rendered more arduous by the necessity to explain the import of the new regulations and to give advice on new labelling requirements. The success achieved with a limited staff is due in no small measure to excellent co-operation by the trade.

Dangerous Drug Investigations

When necessary, investigations have been made into suspected mis-use of dangerous drugs and any necessary corrective action taken. The presence in the regulations of the requirement that all dangerous drug prescriptions, on cancellation, must be remitted to the Director-General forthwith enables any irregularity to be detected and action taken before it assumes major proportions.

Prosecutions

Three prosecutions for breaches of the Poisons Regulations were successfully undertaken during the year. Details are shown in Table XXXIV. In regard to these cases, thanks are due to the Police Department for the very able manner in which its officers secured the necessary evidence and prepared it for submission.

TABLE XXXIV

Prosecutions for Breaches of Poisons Regulations—1958–59

Date	Place	Basis for Prosecution	Fines	Costs
			£ s. d.	£ s. d.
1958—				
22nd September	Brisbane	Sold poison without license	25 0 0	0 14 0
22nd September	Brisbane	Sold poison without license	25 0 0	0 14 0
22nd September	Brisbane	Failure to record poisons sales	25 0 0	0 14 0
		Totals	75 0 0	2 2 0

SECTION OF ENVIRONMENTAL SANITATION

Almost the whole of the field work in environmental sanitation is delegated to the Local Authorities by the provisions of *"The Health Acts,* 1937 *to* 1958," and the relevant Regulations. This law gives the Local Authorities ample power to deal with the common problems and to undertake and execute the work necessary for performing essential services.

Section 7 (2) of the Acts reads, "The Director-General shall, subject to the Minister, be charged with the administration of the Act."

He therefore requires information on what Local Authorities are doing in environmental sanitation and this information is obtained (*a*) by health inspectors submitting quarterly reports, (*b*) by medical officers of health submitting annual reports, and (*c*) by an annual report submitted by the Local Authority on Public Health Administration, and (*d*) by his own officers, who visit most parts of the State at least once a year and who, by actual inspection, can report on the effectiveness of the work done by various Local Authorities.

In addition to furnishing information these visits by officers can be, and very often are, of value to the Local Authority. In their travels, the officers often learn of some aspects of field work which the Local Authority officers are not in a position to become aware, and which can be of value to them. Our officers pass on this class of information and generally assist Local Authorities.

From the sources cited above it appears that most Local Authorities are accepting their responsibilities, and making reasonable efforts to improve the sanitation in their areas, except for one essential service.

It is on the medical officer of health and health inspectors that the Local Authority must rely for an effective health service, and as the full-time field worker is the health inspector, it is from his activities that the most effective results are seen.

In past years it has had to be reported that some of the more distant Local Authorities were without the services of such an officer, due, it appeared, to the reluctance of qualified men to serve in such areas. It is pleasing to report that this year these vacancies have been filled and the only vacancies at the end of the year under review were those normally occurring due to retirements and men changing from one Local Authority to another.

The distribution of health inspectors throughout the State was as follows at the 30th June, 1959.

	30-6-59	1957-58
Brisbane	34	33
Cities and Towns	38	39
Shires (not in any Joint Area) ..	33	33
Joint Areas (two or more Local Authorities)	28	26
Total	133	131

NIGHTSOIL REMOVAL AND DISPOSAL

Reports indicate that this essential service for unsewered areas is usually performed in a reasonable manner. However this state of affairs can only be maintained by constant vigilance, and no one can afford to be complacent. Reports indicate that there is room for improvement particularly in respect of the use of watertight lids and of proper care in burial. Most of this work is done by contractors and in the contracts there are usually clauses giving the Local Authority power to fine the contractor for irregularities in the performance of his work. If more use were made of this clause, contractors would be compelled to pay more attention to these details, and better and safer services could result.

But the pan system for the collection and removal of nightsoil can never be as safe as a water carriage system, which, besides cleanly and swiftly removing the wastes arising from the human body, also provides a means of disposing of waste waters, which is so often a problem in Queensland towns. It is therefore pleasing to see more country towns planning to provide sewerage for the residents, while some cities, not completely sewered, are extending their schemes.

REFUSE COLLECTION, REMOVAL AND DISPOSAL

With regret it is reported that in this essential service, where there is room for so much improvement, little advance has been made during the year under review.

Authorities throughout the world generally regard the carelessly conducted refuse tip as one of the most prolific fly breeding grounds.

Unfortunately too many Local Authorities seem to regard the weekly removal of refuse as the beginning and end of their responsibility, and have no regard to its ultimate disposal. They accept tenders from contractors for the collection and disposal of refuse at prices which are one third to one half of those quoted for the removal of nightsoil, and place the responsibility for covering the refuse on the contractor. Suitable covering material is very often difficult to obtain, certainly more difficult than in the burial of nightsoil. This often results in refuse being left uncovered for lengthy periods. It blows about, is an attraction for scavengers, promotes fly breeding, and is a rat harbourage.

Covering refuse as it is tipped or at the end of each day's tipping, may not completely prevent fly breeding, but it will at least prevent much of the fly strike which takes place when refuse is left uncovered for lengthy periods.

It is feared that little progress will be made until Local Authorities realise the danger in allowing flies to breed freely, and insist that the contractor observe the conditions of his contract.

There are, of course, Local Authorities which do make a really serious attempt to prevent this fly breeding, but they are a small minority. Great improvement will be required from many others before refuse disposal can be held to be satisfactory.

PLAGUE PRECAUTIONS

The Plague Prevention Regulations were first promulgated in the days of bubonic plague epidemics, which fortunately have not occurred for fifty years. Actually, their principal aim is the control of rodents, which in these later days are the known hosts of a number of diseases affecting man.

The present importance of these regulations, therefore, is not so much the control of bubonic plague but of diseases such as leptospirosis and murine typhus, which are both endemic in this State.

The aim of the regulations is to deny the rat food and shelter, and Local Authorities generally attempt to do this by insisting that new buildings are ratproofed. In addition many Local Authorities assist householders to combat these pests by providing poison baits free of charge.

Unfortunately the householder too frequently fails to recognise his responsibility in respect to denying food to rats. Often throwing food scraps to fowls, really amounts to feeding rats which are harbouring in or near fowl runs. It requires the constant vigilance of the Local Authority officers to prevent this. They have full powers to prevent rat breeding in or near fowl yards, and some should take more notice of it.

Although no bubonic plague has occurred in this State, the Commonwealth Quarantine Service exercised a particularly strict guard against the entrance of any rats from overseas. In addition, most cities on the seaboard employ men to destroy rats and mice. A percentage of these are examined for the presence of plague. The following table XXXV. shows the results of their activities and the numbers shown are obviously not indicative of the complete kill. It is only the number of bodies recovered. It is obvious that when poisoning is used, there will be rats whose bodies are never recovered as they die in inaccessible places. This is especially true of some of the slower acting poisons so commonly used now, as they do not create any "bait shyness."

TABLE XXXV

SHOWING NUMBER OF RODENTS DESTROYED IN COASTAL CITIES—1958–59

City	Rats	Mice
Brisbane	42,094	5,173
Bundaberg	368	..
Cairns	1,230	308
Gympie	192	..
Ipswich	739	..
Mackay	1,914	1,069
Maryborough	362	..
Rockhampton	1,836	..
Townsville	1,287	..
Total	50,022	6,550

Total all rodents 1958–59 56,572
Total all rodents 1957–58 62,382
Total all rodents 1956–57 65,780

MOSQUITO ERADICATION

The complete eradication of mosquitoes in this State can only be achieved by costly effort over a long time, and many Local Authorities are doing something toward this goal each year. One example is the provision of drainage which removes known breeding grounds in the vicinity of residential areas.

In addition to the permanent works some Local Authorities conduct measures for temporary control by using larvicidal spray.

These general measures however have to be accompanied by house-to-house inspections which are so necessary to locate the small breeding places. If not eliminated, these can by their very numbers become much more of a nuisance than the larger and well recognised breeding places.

Reports indicate that Local Authorities are attending to this phase of environmental sanitation, in fact, one employs a special staff of mosquito locators.

The Government continued the payment of subsidy on the cost of works designed for the permanent eradication of mosquito breeding places. Table XXXVI. below shows the amounts of subsidy paid during the year under review.

TABLE XXXVI

STATEMENT SHOWING TREASURY SUBSIDIES GRANTED TO LOCAL AUTHORITIES FOR MOSQUITO ERADICATION PURPOSES DURING THE FINANCIAL YEAR, 1958–59

Local Authority	Amount £	s.	d.
Brisbane City Council	81,788	0	0
Cairns City Council	1,200	0	0
Charters Towers City Council ..	3,250	0	0
Redcliffe City Council	11,145	0	0
Rockhampton City Council ..	16,869	0	0
Townsville City Council	6,613	0	0
Dalby Town Council	5,579	0	0
Atherton Shire Council	140	0	0
Cardwell Shire Council	757	0	0
Emerald Shire Council	300	0	0
Johnstone Shire Council	545	16	5
Paroo Shire Council	2,611	0	0
Total	130,797	16	5

CAMPING AREAS AND SEASIDE RESORTS

In this sunshine State many people spend the holiday periods camping at seaside resorts. Our Camp Regulations were designed to specify the minimum requirements in any area used by campers. Many of these areas are owned and conducted by Local Authorities and it is pleasing to report that many of them have provided amenities in excess of the minimum requirements.

The greatest difficulty to be overcome in many sites is the supply of suitable and adequate water, and Local Authorities generally avail themselves of the services of this Department in their search for suitable water sources.

In one instance the Local Authority is unable to obtain a contractor for the removal of nightsoil from a camping area, but it nevertheless does its utmost to provide safe facilities for the campers.

As usual, departmental officers inspected all beaches over the Xmas–New Year holiday period, which is really the peak of the camping season.

WATER SAMPLING

As before, departmental officers played their part in forwarding sampling bottles and collection of the water samples on arrival in Brisbane. As it is most important that the bacteriological samples be delivered as soon as possible to the Laboratory and that they be kept refrigerated while awaiting delivery it has been necessary for officers to work outside normal hours of duty to collect these samples as they have arrived by air.

Many Local Authorities in search of water supplies have availed themselves of this service and other Local Authorities having a reticulated supply have periodically submitted samples to check the efficiency of treatment plants.

HOTEL LICENSING

Departmental officers have made routine inspections of premises licensed under "The Liquor Acts" and submitted recommendations to the Licensing Commission for the improvement of the standard of hygiene. These inspections have included clubs of all kinds as well as hotels.

The Commission usually embodies these recommendations in a notice on the owner and licensee of the premises.

In addition to these inspections, plans and specifications of new premises, or of alterations or additions to existing premises are frequently referred for comment to this section by the Commission.

PAINT

Departmental officers have given attention to policing Sections 127 and 128 of *"The Health Acts,* 1937 *to* 1958."

Where it has been suspected that the paint on or about a house may be the cause of plumbism in a child or where the parents of children request it, samples of paint have been scraped off for analysis. When this analysis has shown the existence of paint contrary to the provisions of the Act the necessary steps have been taken for its removal.

Attention to the labelling of the paint has been routine. Most manufacturers are well aware of the requirements of our law and observe it, but mistakes occur and our officers are constantly watching the retail market. When found there is usually little difficulty in having the matter rectified by the manufacturer.

TOYS

During the year under review a close watch was kept on the toys offered for sale in the State in an effort to prevent the distribution of toys containing lead or on which there was any paint containing lead.

Fortunately most of the vendors took precautions to ensure that toys imported by them were lead free and the number of lines seized was small, and in some instances the quantity was so small that the owner readily agreed to their destruction.

DISTRICT OFFICERS' REPORTS

Toowoomba District.—With perhaps only one exception a very high standard was maintained by both contractors and day labourers under Council control in the actual method of removal of nightsoil from premises. Vehicles were of good general standard, and the use of rubber sealed lids and spring clips, to prevent spillage in transport, appeared to be closely policed by Local Authority Inspectors throughout the area.

Refuse removals were effected satisfactorily but the method of disposal of the refuse after collection was often unsatisfactory.

The Toowoomba refuse incinerator operated efficiently. Sewerage installations at Toowoomba, Warwick, Surat, and Goondiwindi operated satisfactorily.

Work is well advanced on the sewerage installations in Roma, and it is expected that the scheme will be partly in operation at the end of the present calendar year.

Construction has commenced on the St. George sewerage scheme. Dirranbandi, Bollon, and Stanthorpe are other centres in the district that have completed the drawing up of detailed plans for sewerage, while at Injune the Council is investigating its possibility.

Bundaberg District.—In February this year an officer was transferred to Bundaberg in order to attend to the needs of the area surrounding the cities of Bundaberg and Maryborough. His report for the short time he has been in the area is necessarily brief.

He reports that apart from these two cities, Local Authority refuse disposal is lax in that either covering material is not liberally applied or not applied frequently enough.

Nightsoil disposal, however, has been of a good general standard, considering the nature of the soil in some depots.

Rockhampton District.—The removal and disposal of nightsoil throughout this area has been satisfactory.

The collection, removal and disposal of refuse in parts of the area has shown an improvement, but there are still places where no improvement has been noted.

It is expected that the sewerage in Barcaldine will be completed this year while work of a similar nature is proceeding at Longreach. Clermont is investigating the possibility of sewerage.

The clarification and treatment system of the town water supply at Longreach was completed during the year.

The scheme for purification and treatment of the town water supply of Emerald has been approved and loan and subsidy have been granted.

Mackay District.—Apart from one sanitary depot, the others were found to be in good condition when inspected. A search was made for a new site for the unsatisfactory depot but none was found which was any more suitable than the existing one. Recommendations have been made to improve this depot and these, if adopted, should result in some improvement.

An intensive inspection of the whole sewerage system by the City Engineer at Mackay has revealed that it is in a very serious condition due to the many faults which occurred in the laying of the original mains. In the engineer's opinion, the position is so grave that the whole system will have to be renewed before extensions can be made to the whole city area.

No final decision has been reached concerning the treatment works apart from a decision to site them at Mt. Bassett.

Townsville District.—Nightsoil removal and disposal services, generally throughout the area have been conducted in a satisfactory manner. In Townsville the service is now being conducted by day labour and quite a considerable improvement, both in the removal service and the depot. is evident.

The Cloncurry Shire Council proposes commencing a new depot early in the new financial year and the Townsville City Council is contemplating removing the sanitary depot to a new site.

Thuringowa Shire Council has no health inspector so various inspections have been undertaken on behalf of that authority. Building and septic installation plans have been perused and recommendations submitted to the Council.

Cairns District.—Throughout this district the collection, removal and disposal of nightsoil is generally satisfactory, although in remote areas, such as the Gulf towns, difficulties are encountered because of labour problems in carrying out this most important service.

Gradually the old order of the conservancy system is passing, as Local Authorities in this district are installing septic tanks and instituting sewerage schemes.

While the collection and removal of rubbish and household garbage is generally satisfactory, the final disposal described as controlled tipping leaves much to be desired. As elsewhere in the State, the refuse is burned and periodically covered in most Local Authority areas. During the prolonged wet, daily burning was impossible and more rigid fly control was necessary.

SECTION OF HOOKWORM CONTROL

The staff responsible for Hookworm Control comprises a microscopist, two qualified health inspectors, one full-time trained sister at Cairns and one part-time trained sister at Innisfail.

During the year under review 5,781 specimens were examined from all areas and 966 (16·7 per cent.) found to be positive. This total could be dissected to reveal that 19 whites and 947 aborigines were found to be infected. 511 specimens (8·8 per cent.) contained ova of Enterobious, Hymenolepis nana and Trichostrongylus orientalis. Total re-examinations from all areas were 581 and of these 269 were found to be cured.

Surveys were carried out at schools, missions, and aboriginal reserves. Mass treatment of aborigines has been carried out at Daintree Gorge, Pinnacle (Yungaburra) Settlements and Cairns areas; also Church Missions at Bloomfield River, Mitchell River, Weipa, Mapoon, Aurukun, Lockhart River, the Aboriginal Camp at Normanton, Van Rook, Stirling, Macaroni and Glencoe (cattle stations in the Normanton area) were visited and mass treatment of whites and aborigines carried out.

Treatments were also forwarded to Batavia Downs, Lotus Vale, and Lakefield Stations, and to the Australian Inland Mission Hostel, Coen.

An intensive survey was completed at Spence Street Reserve and Lyon Street Settlement in the Cairns City area, as well as in Pine Creek, Gordonvale and Bessie Point which are in the Mulgrave Shire.

Inspectorial, supervisory, and advisory duties have been extended by both field health inspectors to all Missions and Government Settlements as well as to groups of exempted aboriginals.

Re-inspection of Van Rook, Stirling, Macaroni, and Glencoe Stations revealed considerable improvement in hygiene, sanitation, and accommodation for aboriginal employees and their families. The cost of the improvements for the four stations would be approximately £40,000. The co-operation received from the pastoral companies, managers and overseers, in less than twelve months does reveal a real interest in the eradication of the disease and in the welfare of aborigine employees.

Appreciation is due to the Medical Superintendents and Matrons of all hospitals, to Superintendents and spiritual heads of all Missions and Settlements, and to Health Inspectors of all the Local Authorities who have assisted in eradication of the disease.

The Section was depleted by the absence for several months of Microscopist in Charge, Mr. S. Thompson, owing to a serious illness. This officer has given long and efficient service and it is hoped that the near future will find him returning to duty completely recovered.

TABLE XXXVII

HOOKWORM

Showing Number of Persons Examined, and Results of Examination and Treatment—1958–1959

Persons, Location	Number Examined	Number Positive		Per cent. Positive		Results of Treatment		
		Hook-worm	Other Worms	Hook-worm	Other Worms	Cured	Not Cured	Unspeci-fied
A. White Population—								
Pre-School Children—								
Cairns	97	..	1	..	1·0	..	..	..
Innisfail	6	..	..	..	..	..	..	..
Tully	1	..	..	..	..	..	..	..
Mossman	12	..	..	..	..	..	..	..
Daintree	4	..	..	..	..	..	..	..
Bloomfield River Mission	1	..	..	..	..	..	..	..
Cooktown	5	..	..	..	..	..	..	..
Coen	1	..	..	..	..	..	..	..
Atherton	7	..	..	..	..	..	..	..
Normanton	2	..	..	..	..	..	..	..
Croydon	2	1	..	50·0	..	1	..	..
Mitchell River Mission	2	..	..	..	..	..	..	..
Lotus Vale Station	1	..	..	..	..	..	..	..
Batavia Downs Station	1	..	..	..	..	..	..	..
Minnamoolka Station	1	..	..	..	..	..	..	..
Total (Pre-School)	143	1	1	0·7	0·7	1	..	..
School Children—								
Cairns	1,649	10	104	0·6	6·3	17	..	..
Innisfail	11	..	1	..	9·0	..	..	..
Tully	4	1	..	25·0	..	..	..	..
Mossman	30	2	..	6·6	..	2	..	..
Daintree	24	2	1	8·3	4·1	..	..	..
Cooktown	4	..	..	..	..	..	..	..
Coen	8	1	..	12·5	..	..	..	..
Atherton	10	..	..	..	..	1	..	..
Yungaburra	188	1	17	0·5	9·0	..	..	..
Normanton	1	..	..	..	..	..	..	..
Croydon	16	..	..	..	..	..	..	..
Batavia Downs Station	2	..	..	..	..	..	..	..
Mitchell River Mission	4	..	..	..	..	..	..	..
Mapoon Mission	2	..	..	..	..	..	..	..
Total (School)	1,953	17	123	0·8	6·2	20	..	..
Other Persons—								
Cairns	52	1	5	1·9	9·6	1	..	..
Innisfail	9	..	1	..	11·1	..	..	..
Tully	3	..	..	..	..	..	..	..
Mossman	12	..	1	..	8·3	..	..	..
Daintree	7	..	..	..	..	..	..	..
Gorge Reserve	2	..	..	..	..	..	..	..
Cooktown	5	..	..	..	..	..	..	..
Hopevale Mission	2	..	..	..	..	..	..	..
Coen	3	..	..	..	..	..	..	..
Atherton	9	..	..	..	..	..	..	..
Croydon	1	..	1	..	100·0	..	..	..
Batavia Downs Station	2	..	..	..	..	..	..	..
Mitchell River Mission	9	..	..	..	..	..	..	..
Weipa Mission	13	..	..	..	..	..	..	..
Total (Other)	129	1	8	0·7	6·2	1	..	..
Total (All Ages)	2,225	19	132	0·8	5·9	22	..	..

TABLE XXXVII—*continued*

HOOKWORM—*continued*

Showing Number of Persons Examined, and Results of Examination and Treatment—1958–1959—*continued*

Persons, Location	Number Examined	Number Positive		Per cent. Positive		Results of Treatment		
		Hook-worm	Other Worms	Hook-worm	Other Worms	Cured	Not Cured	Unspecified
B. Aboriginal Population—								
Pre-School Children—								
Cairns	92	13	7	14·1	7·6	1	..	..
Yarrabah Mission	137	1	14	0·7	10·2	..	..	..
Bessie Point, Cairns	14	1	..	7·1	..	1	..	..
Tully	14	9	..	64·2	..	..	9	..
Mossman	26	9	1	34·6	3·8	1	3	..
Gorge Reserve	26	9	..	34·6	..	18	4	..
Daintree Mission	21	7	..	33·3	..	2	..	..
Bloomfield River Mission	..	..	..	..	..	4	..	..
Cooktown	1	1	..	100·0	..	..	..	..
Hopevale Mission	53	5	5	9·4	9·4	6	..	..
Coen	8	2	2	25·0	25·0	1	..	..
Atherton	5	..	..	..	..	..	..	..
Pinnacle Reserve	30	8	1	26·6	3·3	2	..	..
Batavia Downs Station	2	1	..	50·0	..	..	..	..
Weipa Mission	18	1	3	5·5	16·6	..	..	1
Mapoon Mission	48	17	3	35·4	6·2	..	..	17
Aurukun Mission	40	26	3	65·0	7·5	..	..	26
Mitchell River Mission	50	17	4	34·0	8·0	..	..	17
Lockhart River Mission	48	38	27	79·1	56·2	..	..	38
Total (Pre-School)	633	165	70	26·0	11·0	36	16	99
School Children—								
Cairns	173	27	11	15·6	6·3	9	..	..
Bessie Point, Cairns	24	..	3	..	12·5	..	..	..
Yarrabah Mission	220	6	23	2·7	10·4	..	..	..
Tully Area	31	25	..	80·6	..	2	..	..
Mossman Area	21	9	..	42·8	..	14	..	..
Gorge Reserve	19	17	2	89·4	10·5	27	..	..
Daintree Mission	35	15	..	42·8	..	8	..	..
Bloomfield River Mission	8	1	..	12·5	..	19	..	..
Hopevale Mission	102	45	28	44·1	27·4	24	..	..
Coen	14	3	2	21·4	14·2	6	..	..
Atherton	13	1	1	7·7	7·7	..	..	..
Pinnacle Reserve	37	17	..	45·9	..	2	..	..
Yungaburra	5	..	..	..	..	..	..	..
Batavia Downs Station	2	1	1	50·0	50·0	..	..	..
Croydon	14	7	5	50·0	35·7	..	..	..
Lakefield Station	..	..	..	..	..	2	..	..
Lotus Vale Station	1	..	..	..	..	..	..	..
Weipa Mission	32	1	2	3·1	6·2	..	..	1
Mapoon Mission	57	29	3	50·8	5·2	..	..	29
Aurukun Mission	140	35	21	25·0	15·0	..	..	35
Mitchell River Mission	92	45	28	48·9	30·4	..	..	45
Lockhart River Mission	77	63	55	81·8	71·4	..	..	63
St. Pauls Island	5	..	..	..	..	..	..	..
Total (School)	1,122	347	185	30·9	16·4	113	..	173
Other Persons—								
Cairns	220	27	1	12·2	0·4	13	..	..
Bessie Point, Cairns	19	..	..	..	..	..	..	..
Yarrabah Mission	243	6	12	2·4	4·9	1	..	..
Tully Area	71	37	..	52·1	..	2	..	..
Mossman	18	8	..	44·4	..	3	..	..
Gorge Reserve	36	14	..	38·8	..	31	..	..
Daintree Mission	42	9	..	21·4	..	4	..	..
Bloomfield River Mission	..	..	..	..	..	21	..	..
Cooktown	3	1	..	33·3	..	1	..	..
Hopevale Mission	259	35	27	13·5	10·4	11	..	..
Coen	36	8	1	22·2	2·7	3	..	..
Atherton	6	..	..	..	..	..	..	..
Pinnacle Reserve	57	22	1	38·5	1·7	8	..	..
Batavia Downs Station	4	1	..	25·0	..	..	..	..
Van Rook Station	1	..	..	..	..	..	..	..
Weipa Mission	79	3	2	3·7	2·5	..	..	3
Mapoon Mission	120	30	2	25·0	1·6	..	..	30
Aurukun Mission	239	77	23	32·2	9·6	..	..	77
Lockhart River Mission	176	106	47	60·2	26·7	..	..	106
Mitchell River Mission	170	50	8	29·4	4·7	..	..	50
Lakefield Station	2	1	..	50·0	..	..	..	1
Total (Other)	1,801	435	124	24·1	6·8	98	..	267
Total (All Ages)	3,556	947	379	26·6	10·6	247	16	539
Grand Total (White Population and Coloured Population)	5,781	966	511	16·7	8·8	269	16	539

DIVISION OF TUBERCULOSIS

Director: E. W. ABRAHAMS, M.D. (Melb.), M.R.C.P. (Lond.)
Assistant Director: CYRIL EVANS, M.B., B.S., D.T.M., M.R.C.P. (Lond.)
Chest Physician, Thursday Island: G. HALES, M.B., Ch.B., T.D.D. (Wales)
Chest Physician, Cairns: T. G. PAXON, M.D. (Lond.), M.R.C.P. (Lond.)
Chest Physician, Townsville: I. DICKSON, M.B., Ch.B., C.P.H., R.C.P., R.C.S. (Eng.)
Chest Physician, Toowoomba: GWYN HOWELLS, M.D., M.R.C.P. (Lond.)

The rise in notifications commented upon in last year's Report has been very largely maintained this year, the number 789 (Table XLI) being only 63 less than last year. This suggests that the increase over the previous year was due to better reporting rather than to any particular result of the influenza epidemic as previously suggested.

The death rate, 5·9, is substantially unchanged and is so low that further reduction is unlikely. (Table XLV).

STAFF

There have been no changes in medical staff during the last year. Trained chest physicians are located at Thursday Island, Cairns, Townsville, Rockhampton, and Toowoomba, as well as in Brisbane.

Great difficulty has been experienced with staff for the Mobile X-ray unit, which was for a period of six months without a trained radiographer and consequently unable to function.

BUILDINGS

It is anticipated that the Brisbane Chest Hospital will open in September and this will enable the patients at present accommodated at the South Brisbane Hospital to be transferred to the modern hospital buildings at Chermside.

Sketch plans have been drawn for a new building on the site adjacent to the Chest Clinic. The present building is congested and relief will not be afforded to the overcrowding in the various departments until the new building is erected.

MASS RADIOGRAPHY

Again, great difficulties have been experienced in obtaining trained radiographers to operate miniature X-ray equipment and the amount of work done by this unit has consequently been most disappointing. Since February, receptionist-radiographers have been operating these machines with marked success and the additional caravan mounted X-ray machines shortly to be delivered will be staffed in this manner, the work being done under the supervision of a trained radiographer.

Mass radiography in the Chest Clinic is continuing satisfactorily.

It is pleasing to record that during this year a report to the British Medical Research Council (the Adrian Report) has reported most favourably on the risks (if any) from the biological effects of X-rays as used in mass radiography and recommends its continued use as a tuberculosis case-finding measure. This should largely quell the qualms of persons whose fears have been raised by earlier less well considered pronouncements.

TREATMENT

No major differences in treatment have occurred during the past year. Streptomycin, para animo salicylic acid and isoniazid remain the three drugs upon which the chemotherapy of tuberculosis is based, with viomycin, cycloserine and pyrazinamide available as useful drugs where difficulties in administration or resistance of the organism to the drugs previously mentioned makes them ineffective. Unfortunately, these latter drugs are all less effective and more toxic than the original three as well as being very expensive.

COUNTRY CLINICS

During this year the policy of further decentralisation of follow-up of discharged patients and of consultation has been pursued. Every two months a medical officer of the Brisbane Chest Clinic visits Cherbourg Aboriginal Settlement and the general hospitals at Maryborough, Bundaberg, Gympie, and Nambour, where out-patient consultant clinics are held. These visits have greatly improved the supervision of tuberculous patients whose treatment previously was supervised by correspondence without any direct contact with doctors of the Brisbane Chest Clinic.

Hospital staff and local practitioners have availed themselves of the opportunity to consult with the visiting medical officer and this has resulted in a better service to the residents in these areas in respect of diseases of the chest.

Similar tours are made by the chest physicians at Cairns, Townsville, and Toowoomba, the towns visited being Innisfail, Atherton, Babinda, Mareeba, Ingham, Charters Towers, Ayr, Cloncurry, Mt. Isa, Dalby, and Warwick.

TUBERCULIN SURVEYS

In last year's report attention was drawn to the abnormally high tuberculin rates prevailing in Queensland cities and towns. During this year some progress has been made in an investigation into this problem.

Due to the courtesy of Dr. Carol Palmer and Dr. Lydia Edwards of the Division of Special Health Services, Department of Health, Washington, U.S.A., supplies of a skin testing antigen obtained from organisms known as the Battey strain of mycobacteria have been made available to us. This organism is the cause of a significant amount of human pulmonary disease in the South Eastern districts of the United States and skin testing programmes there have shown that many more people reacted to it than reacted to an anitgen prepared from the human strain of tubercle bacilli. Testing in Ayr, Doomadgee Mission and Brisbane has produced the results set out in Table XLVIII.

It will be seen that the number of children reacting to five tuberculin units of P.P.D. "S"—that is, a small dose of standard human strain tuberculin—is small, while those reacting to a similar does of P.P.D. "B", the extract prepared from the Battey strain, closely follow the figures for the Heaf test performed with old tuberculin, which has been previously shown to be very similar to 10 tuberculin units of old tuberculin by the Mantoux method. In Brisbane the overall percentage of reactors is smaller but, again the results with P.P.D. "S" and "B" vary greatly, "B" in this case detecting more reactors than old tuberculin by the Heaf method. This work is continuing in an effort to discover the extent of this problem. While one is not justified, on these results in assuming that there is infection with the Battey strain organisms in Queensland, it provides more suggestive evidence that some organism other than the typical human strain of tuberculosis is responsible for the bulk of the sensitisation occurring.

The practical implications of this work are most disturbing. The clinical value of a negative tuberculin test as a diagnostic aid is unimpaired as a negative reactor is not likely to have tuberculosis. In a young child, however, a positive reaction cannot be regarded as practically diagnostic of tuberculous infection as has been generally claimed and much more care will be necessary in future in initiating prophylactic drug treatment in infants on the basis of tuberculin tests only.

Epidemiologically, case finding procedures based upon tuberculin tests are seriously embarrassed. There is, for instance, much less chance of finding an active case of tuberculosis in the family of a positively reacting school child in Queensland than in colder climates and so this is a less useful means of case finding. Similarly tuberculin testing with a view to diminishing the numbers of persons requiring chest X-rays is not likely to be very effective. It would therefore appear that it will be necessary to depend on mass radiography as a case finding measure in Queensland for a longer period than in any other Australian State.

Dr. E. Singer of the Queensland Institute of Medical Research is investigating the bacteriological aspect of this problem. He has recovered mycobacteria from a wide variety of sources, including human tonsils, unpasteurised milk and animal tissues from the abattoirs. So far, however, there is no indication of the source of the organism in nature or its mode of entry into the body. It may well be that the relative freedom from tuberculosis which white children in Queensland enjoy may be in part due to infection with this organism having a certain preventive effect against infection with more virulent organisms, but no positive evidence on this point is available yet.

SURGERY

A very considerable compliment was paid to the standard of local surgical treatment by the invitation of the Department of Territories to Dr. Morgan Windsor to recruit a local team of nurses physiotherapists and surgeons in order to visit Port Moresby for six weeks to operate on natives suffering from tuberculosis. This visit was still in progress at the end of June.

A similar compliment was the invitation extended to the Director by the South Pacific Commission to act as the Australian consultant at a seminar held in November, 1958, in American Samoa. Consultants from France, United States of America and Great Britain also participated and the islands and territories of the Pacific were widely represented. The opportunity of discussing mutual problems and review of the techniques and facilities available was of considerable interest and must be a great impetus to better care and control in the territories represented.

TUBERCULOSIS ALLOWANCES (See Table LI)

The number of tuberculosis allowances being paid this year is 451, as compared with last year when the figure was 548. Much of this reduction is probably due to a quicker return to work of patients who, while continuing to take anti-tuberculosis drugs, can, with safety resume work within a shorter time after discharge from sanitorium than has been the previous practice.

A considerable difficulty arises from the ineligibility of certain sections of migrants for the tuberculosis allowance for varying periods after they come to Australia, notably Russian evacuees from China, a number of whom have been discovered to have tuberculosis shortly after their arrival here and who have been in considerable financial difficulty because of these restrictions.

In general, the tuberculosis allowance scheme continues to function well and provides much needed help to the families of those unfortunate enough to be in need of treatment for tuberculosis. This allowance is recommended by the Director of Tuberculosis who is responsible for this purpose to the Commonwealth Department of Health. The State has no jurisdiction in regard to tuberculosis allowances.

TABLE XXXVIII

SHOWING NUMBER OF HOSPITAL BEDS IN QUEENSLAND EXCLUSIVELY AVAILABLE FOR TUBERCULOSIS PATIENTS

Chest Hospital, Chermside	186
South Brisbane Auxiliary Hospital	87
Rockhampton Thoracic Annexe	50
Townsville Thoracic Annexe	60
Cairns Thoracic Annexe	50
Toowoomba Thoracic Annexe	50
Thursday Island	95
Repatriation Hospitals (Commonwealth)—	
Greenslopes	86
Kenmore	76
Total	740

TABLE XXXIX

Showing Number of X-Ray Examinations Carried Out, 1958–59

——	Chest Clinic	Mobile Unit	Brisbane Hospital	South Brisbane Hospital	Rock-hampton	Too-woomba	Cairns	Towns-ville	Thursday Island	Total
Micro Films	43,802	16,281	17,063	13,940	1,860	3,582	1,583	2,384	..	100,495
Micro Re-rays ..	4,126	1,233	526	892	47	82	130	341	..	7,377
Other large films ..	15,197	..	..	..	1,487	4,972	2,008	3,157	4,051	30,872
Total	63,125	17,514	17,589	14,832	3,394	8,636	3,721	5,882	4,051	138,744

TABLE XL

Showing Results of Mobile X-Ray Unit Survey 1st January, 1958, to 31st December, 1958

Locality	Number of Micro Films Taken	Number of Active Cases Found	Number of Cases per 1,000 Micro Films	Number of In-active Cases	Old Cases Redis-covered	Heart Lesions Noted	Carcin-oma Noted	Benign Tumour Noted	Other Lung Con-ditions	Bronchi-ectasis Noted	Pneumo-coniosis Noted	Under Invest-igation
Light Street Depot ..	503	1	1·98	1	..	..	..	..	26	..	..	..
S. S. "Anking"	38	..	..	2	..	..	..	..	1	..	..	..
Lowthers	52	..	..	..	..	..	..	..	14	..	7	..
University	449	..	..	..	..	1	..	..	2	1	..	..
Railway Workshops Northgate	180	..	..	3	..	..	..	..	21	..	..	..
Teachers' College	954	..	..	1	..	..	..	..	26	..	..	..
Brisbane Boys' College ..	339	..	..	..	..	..	..	..	8	1	..	..
Ipswich Road Tram Depot	339	..	..	4	..	1	..	..	31	..	..	..
Paddington Tram Depot ..	81	..	..	1	..	..	..	..	4	..	..	..
Evans Deakin	350	2	5·7	5	..	..	..	..	35	1	..	..
General Works, P.M.G. ..	737	..	..	10	..	1	..	..	47	2	..	..
B.C.C. Works Department	283	1	3·53	9	..	3	..	..	27	..	..	..
Northgate Cannery ..	763	..	..	11	..	5	1	..	38	1	..	1
South Auto Exchange ..	600	..	..	6	..	..	..	..	61	2	..	..
State Government Offices	1,326	2	1·5	9	..	5	..	..	126	1	1	..
Gatton College	680	..	..	1	..	1	..	..	28	..	..	..
Toowoomba Mental Hospital	1,468	13	8·8	12	1	15	..	2	87	9	..	..
"Eastern Queen" ..	31	..	..	..	..	..	..	2	8	..	..	..
City Hall	6,112	7	1·14	37	1	27	2	2	343	4	..	2
Dunwich	273	..	..	2	..	..	..	..	11	..	..	..
Ipswich Mental Hospital ..	723	6	8·29	2	..	2	..	..	12	1	..	11
Total	16,281	32	1·96	116	2	61	3	6	956	23	8	14

TABLE XLI

Showing Sources of Notifications of Tuberculosis, 1957–1958—1958–1959

——	1957–58	1958–59
Hospitals	210	187
Chest Clinic	422	449
Private Practitioners	88	42
Death Certificates	11	4
Sanatoria	59	63
Repatriation Department	47	24
Thursday Island Hospital	7	4
Post Mortem	6	9
Cherbourg Aboriginal Settlement	2	3
Palm Island Aboriginal Settlement	..	4
	852	789

TABLE XLII

Showing Information from Case Register, 1958–59

——	Greater Brisbane Area			Country Areas			State		
	M.	F.	P.	M.	F.	P.	M.	F.	P
Notifications, 1958–59 ..	231	131	362	309	118	427	540	249	789
Cases on Register 1–7–58 and still on Register	1,667	961	2,628	1,656	942	2,598	3,323	1,903	5,226
**Cases added to Register 1958–59	200	127	347	296	114	410	516	241	757
On Register 30th June, 1959 ..	1,887	1,088	2,975	1,952	1,056	3,008	3,839	2,144	5,983

M.—Males ; F.—Females ; P.—Persons.

**Represents net increase after deaths and other removals from Register.

TABLE XLIII

Showing Bacteriological Status of Patients when Notified

—	Brisbane	Country	State
Pulmonary—			
Positive—			
Smear	44	79	123
Culture	81	84	165
Animal Inoculation	33	5	38
Negative—			
Smear	12	30	42
Culture	11	62	73
Animal Inoculation	1	5	6
Not Stated—Results Pending	155	123	278
Death Notifications	6	4	10
Total Pulmonary	343	392	735
Non-Pulmonary—			
Positive	..	3	3
Negative	3	8	11
Not Stated	14	25	39
Death	2	2	4
Total Non-Pulmonary	19	38	57
Total All Forms	362	430	792**

** 3 cases are both Pulmonary and Non-Pulmonary.

TABLE XLIV

Showing Details of Tuberculosis in Migrants, Queensland

—	British			Non-British			Total		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
Cases prior to 1st July, 1958	109	63	172	181	92	273	290	155	445
Cases, 1st July, 1958, to 30th June, 1959	19	11	30	25	7	32	44	18	62
Total	128	74	202	206	99	305	334	173	507

Rates :

1. Queensland total cases per 100,000 Australian Population = 59·8.
2. Queensland Migrant cases per 100,000 Australian Migrant Population = 35·4.
3. Queensland total cases per 100,000 Queensland Population = 397·9.

Direct comparison is not possible as the distribution of migrants in various States is not known.

Cases are expressed in terms of total known cases, on case register in each group.

TABLE XLV

Showing Number of Deaths from Tuberculosis and Death Rate From Tuberculosis (per 100,000 Mean Population), Queensland

Year	Deaths	Death Rate
1950	236	19·8
1951	226	18·4
1952	216	17·2
1953	162	12·6
1954	140	10·6
1955	137	10·2
1956	81	5·7
1957	92	6·6
1958	83	5·9

TABLE XLVI

Showing Number of Cases on Register and Prevalence Rate (per 100,000 Population), Queensland **

Year Ending	Cases on Register	Prevalence Rate
30th June, 1952	1,942	154
30th June, 1953	2,569	198
30th June, 1954	3,201	243
30th June, 1955	3,746	279
30th June, 1956	4,263	311
30th June, 1957	4,731	343
30th June, 1958	5,371	378
30th June, 1959	5,983	398

** Total known cases on register per 100,000 population.

TABLE XLVII

SHOWING TUBERCULIN TESTS AND B.C.G. VACCINATIONS, 1958–59

—	Tuberculin Tested	Did Not Return		Positive		Positive After Previous B.C.G.		Negative		B.C.G. Given		B.C.G. Not Given**		Refused B.C.G. Vaccination	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chest Clinic	6,398	239	3·7	1,236	19·3	1,725	27·0	3,198	50·0	1,449	45·3	1,556	48·6**	193	6·0
Schools—Ipswich ..	1,497	23	1·5	231	15·4	11	0·7	1,232	82·3	1,220	99·0	..	..	12	1·0
Schools—Brisbane ..	8,625	182	2·1	1,857	21·5	332	3·8	6,254	72·5	6,162	98·5	..	..	92	1·5
National ServiceTrainees	1,421	92	6·5	559	39·3	112	7·9	658	46·3	634	96·4	24	3·6	..	..
Teachers' Training College	724	13	1·8	378	52·2	228	31·5	105	14·5	95	90·4	3	2·9	7	6·7
Gatton College	353	30	8·5	164	46·4	14	3·9	145	41·1	140	96·5	5	3·4	..	..
University	1,004	128	12·7	439	43·7	178	17·7	259	25·8	246	94·9	..	..	13	5·0
Thursday Island	1,159	19	1·6	1,030	88·8	..	..	110	9·5	313	..	..	..	..	..
Cairns	7,519	138	1·8	3,144	41·8	78	1·0	4,159	55·3	886	21·3	3,273	78·6	..	..
Townsville	6,210	161	2·6	3,902	62·8	..	..	2,172	34·9	2,103	96·8	64	2·9	5	0·2
Palm Island	506	26	5·1	361	71·3	..	..	119	23·5	119	100·0	..	..	..	..
Doomadgee Mission ..	237	..	..	70	29·5	..	..	167	70·5	167	100·0	..	..	..	..
Rockhampton ..	4,074	82	2·0	3,001	73·6	..	..	991	24·3	887	89·5	104	10·5	..	..
Toowoomba	8,157	134	1·6	2,261	27·7	177	2·2	5,585	68·4	5,435	97·3	73	1·3	77	1·4
Total	47,884	1,267	2·6	18,633	38·9	..	..	25,154	52·5	19,856	78·9	5,102	20·3	399	1·9

** Use of B.C.G. in young children is not advised in absence of contact.

TABLE XLVIII

SPECIAL TUBERCULIN SURVEYS

No. Tested	Testing Agent	Method	No. Positive	Per cent. Positive
	BRISBANE—SCHOOL CHILDREN AGED 12–14 YEARS			
1002	Old Tuberculin	Heaf	142	14
	P.P.D. " Battey "	Intradermal	249 5 mm. and less recorded as Negative	25
	P.P.D. " S " (Human) (5 Tuberculin units)	Intradermal	47	5
	AYR—SCHOOL CHILDREN AGED 7–15 YEARS			
810	(Aged 12–14 in brackets)— Old Tuberculin	Heaf	315 (143)	40 (41)
	P.P.D. " Battey "	Intradermal	232 (122)	29 (35)
	P.P.D. " S " (Human) (5 Tuberculin units)	Intradermal	538 (22)	5 (6)
	DOOMADGEE MISSION—(AUSTRALIAN ABORIGINALS)			
186 (38)	All ages (12–14 in brackets)— Old Tuberculin	Heaf	61 (12)	33 (32)
	P.P.D. " Battey "	Intradermal	54 (9)	29 (23)
	P.P.D. " S " (Human) (5 Tuberculin units)	Intradermal	15 (3)	8 (7)

TABLE XLIX

THURSDAY ISLAND CENTRE

Tuberculin Tests (Mantoux 1–1,000 O.T. or followed by 1–100 O.T. as Necessary, and B.C.G. Vaccinations (1–7–58 to 30–6–59)

Place or Group	Number Mantoux Tested	Number Not Returned	Number Positive	Number Negative	Number B.C.G. Vaccinated	Refused B.C.G. Vaccination	Refused all Testing
Chest Clinic, Thursday Island ..	266	14	213	39	244*	A few white parents refused B.C.G. for their newborn babies	
Mabuiag Island	226	..	211	15	15	0	0
Badu Island	195	4	168	23	21	0	0
St. Paul's Mission	188	..	175	13	13	0	0
Kubin Village	108	1	94	13	13	0	0
Gerain Village	8	..	7	1	1	0	0
Naghir Island	23	..	22	1	1	0	0
Yorke Island	145	..	140	5	5	0	0
Totals	1,159	19	1,030	110	313	0	0

* Includes 205 infants vaccinated without prior Tuberculin test.

TABLE L

Complications Following Vaccinations, 1959–59

Locality	Age Group	Given B.C.G. No.	Local Ulcer		Enlarged Glands		Incised Glands		Total Complications	
			No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage
Chest Clinic, Brisbane	0–2 years ..	355	..	..	2	0·56	1	0·28	3	0·85
	3–14 years ..	6,979	2	0·03	..	..	..	..	2	0·03
	Over 14 years ..	2,612	..	..	..	..	..	..	..	..
	Total ..	9,946	2	0·02	2	0·02	1	0·01	5	0·05
Thursday Island ..	0–2 years ..	245	16	6·53	4	1·63	..	..	20	8·16
	3–14 years ..	59	1	1·69	..	..	..	..	1	0·4
	Over 14 years ..	9	..	..	..	..	..	..	..	..
	Total ..	313	17	5·43	4	1·27	..	..	21	6·7
Cairns	0–2 years ..	40	..	..	..	..	..	..	..	..
	3–14 years ..	574	..	..	..	..	..	..	..	..
	Over 14 years ..	272	..	..	..	..	..	..	..	..
	Total ..	886	..	..	..	..	..	..	..	..
Rockhampton ..	0–2 years ..	13	2	15·38	..	..	..	..	2	15·38
	3–14 years ..	725	1	0·14	..	..	..	..	1	0·14
	Over 14 years ..	148	..	..	1	0·68	..	..	1	0·68
	Total ..	886	3	0·34	1	0·11	..	..	4	0·45
Townsville	0–2 years ..	57	..	..	..	..	..	..	..	..
	3–14 years ..	2,084	2	0·9	1	0·05	..	..	3	0·14
	Over 14 years ..	248	..	..	..	..	..	..	..	..
	Total ..	2,389	2	0·08	1	0·04	..	..	3	0·12
Toowoomba	0–2 years ..	..	..	..	..	..	..	..	..	..
	3–14 years ..	..	..	..	..	..	..	..	..	..
	Over 14 years ..	..	..	..	..	..	..	..	..	..
	Total ..	5,435	..	..	..	..	..	..	..	..

TABLE LI

Showing Number of Tuberculosis Allowances Being Paid in Queensland, at 30th June, 1959

—	Male	Female	Total
Number accommodated in tuberculosis institutions	170	48	218
Number not so accommodated	169	64	233
Total on Allowance	339	112	451

DIVISION OF INDUSTRIAL MEDICINE

REPORT FOR THE YEAR ENDED 30TH JUNE, 1959

Director of Industrial Medicine: E. M. RATHUS, M.B., Ch.B. (Cape Town)

Acting Director of Industrial Medicine: M. H. GABRIEL, M.B., B.S. (Qld.)
(during Director's absence abroad)

Assistant: F. H. STAMP

Acting Officer in Charge—Weil's Disease Control: D. KENNEDY, M.R.San.I.

During the past year, the activities of this Division have been applied to problems of health hazard and their control in industry on a fairly routine basis. The pattern set for investigations depends on several factors. In the main, cases of known industrial disease are referred for opinion and routine checks of potentially troublesome industries are carried out.

A fair proportion of the work is taken up by the examination and investigation of cases referred for opinion by outside practitioners or by employers. Occasionally workers will themselves report for examination, either for elucidation of symptoms or for reassurance. At present the amount of such work is minimal, and there is no doubt that more could be accomplished in this direction were patients referred to this Division by outside practitioners where the relationship between the man's occupation and his symptoms are not clearly established. A facile diagnosis of occupational illness is easily made, and a man who has been certified as suffering from a compensable illness is understandably critical when he finds his claim eventually rejected by an outside referee. Admittedly such cases are few, but they are important and distressing. In the long run they are probably unavoidable as symptomatology of disease is overlapping and toxic or noxious substances produce symptom complexes very similar to chronic disease of various kinds.

It becomes almost impossible to sort out the proportion of damage due to a substance such as lead operative over many years of a man's working life, and that due to the natural degeneration and pathological processes of advancing age. The modern concepts of occupational health are not unfavourable to the exposed worker and compensation is recognised as payable for proved or probable hazards ranging from infections such as Q fever in shearers and scrub typhus in timber workers, to beryllosis in nuclear energy plants.

Approximately eighty firms and premises were inspected and processes and working conditions examined for hazard of obvious or intrusive type.

The Division maintained its overall supervision of workers involved in potentially hazardous lead trades, and several cases of toxic absorption were unmasked.

The Government Chemical Laboratory again provided important analyses of biological materials for evidence of toxic agents, and of other materials for potential noxious effect on workers exposed in various circumstances. The latter included dust counts, analyses of fume concentrations and tolerance of harmful gases, and other necessary investigations requested as an integral part of the appraisal of working conditions in respect of health hazards.

The State Government Insurance Office refers many of its files to the Division for opinion as to the credibility of evidence or to the admissability of claims when compensation is sought as the result of disability claimed to be due to exposure to some industrial hazard or process or the like. Many claims involving Q fever, leptospirosis, &c., are reviewed as well as the more obvious industrial claims involving lead, arsenic, silica, solvents, &c.

1. SILICOSIS

Only one new case of silicosis was referred to this Division. This man had worked for 13 years at Mount Morgan and Mount Crosby and about 20 years on sewerage and tunnelling. He exhibited Grade III. silicosis but had no clinical symptoms.

2. QUARRY WORKERS

A survey of quarry workers throughout the State is being undertaken in an effort to obtain a general picture of the dust problem in Queensland quarries. Previous experience had shown that certain quarries produced a quota of cases but to date no further cases have been uncovered. The meagre information at present available shows that quarries producing large quantities of rock are obviously more important and that men have to be exposed for long periods before changes are apparent. Many workers do not seem to remain over five years at this work, and this may operate to the advantage of these men by minimising exposure.

However, several cases of silicosis have been discovered during the survey, but these have all been in men who had been engaged in hard rock mining for many years. It is pleasing to state that local authorities and medical superintendents of hospitals are co-operating fully in providing essential data and X-rays.

3. AIR POLLUTION

Necessary equipment has been purchased for initial surveys and the first group of twenty deposit gauges were set up in the month of March at strategic points in the environs of Brisbane. Two points have also been selected in the nearby coal mining centre of Ipswich, which should provide interesting data.

Six smoke and sulphurdioxide stations of the continuous recording type are ready to be set up, and a Hemeon Smoke and sulphide recorder is on order.

The laboratory for the necessary analytical procedures has been completed and the routine of collection of specimens is under way.

It must be pointed out that critical analysis of the data obtained will not be possible for at least twelve months.

This Division, the staffs of the Government Chemical Laboratory, the Commonweatlh Meteorological Bureau, officers of the Brisbane City Council, and other official bodies, will co-operate in collating data and analysing the results obtained.

4. RADIOACTIVE SUBSTANCES

The Radioactive Substances Act was proclamed on 1st July, 1958. A considerable time was spent in discussions on the formulation of suitable regulations under the Act. It is intended to adhere to the concept of uniformity throughout the Commonwealth though no doubt certain differences will be apparent in the final version.

Relatively litle use of radioactive substances is undertaken in the industrial field in Queensland at present. Gamma-radiography on the welding of large diameter pipes on the Tinaroo Falls project; a similar use in large ship building and engineering yards; and the potential installation of gamma-ray switches at Mount Isa are the main situations requiring some supervision during the past year.

An interesting investigation was made at a plant treating mineral sands. Monozite of up to 99 per cent. purity is produced as one of the products and this material averaged about 7·5 per cent. of thorium oxide. The bagged product was being stored in quantities up to 20 tons in close proximity to the working area of laboratory staff and the gamma radiation was found to be approximately three times the permissible maximum for 40 hours exposure per week. A more remote storage site was recommended and measures suggested to reduce dustiness in the neighbourhood of the final magnetic separator.

5. LUMINISING

A survey of luminising firms was undertaken and it was obvious that little attention was paid to the nature of the radioactive paint used, and little or no knowledge of the harm possible was evidenced by users. As a result, a special pamphlet was prepared and circulated through the Horological Guild for their guidance.

6. METHYL BROMIDE

During July four (4) operators engaged in the fumigation of houses by methyl bromide were taken to hospital suffering from methyl bromide poisoning. These men have been carefully followed and it suffices to say that of this group one has severe and probably permanent disablement.

One other man, poisoned in June, has developed a less severe but not less serious complication in that he has developed a Jacksonian type of epilepsy.

Urgent investigations at the time of the occurrence of the four simultaneous cases unearthed the alarming fact that complete batches of canisters used on gas masks were defective. These have been replaced by one of international repute, and a constant surveillance of men engaged in the work has been instituted under a Safety Officer. There has been no recurrence of accidents due to this source.

Bulk wheat handling silos in Brisbane have been fitted with apparatus for fumigating infested wheat with methyl bromide. The Division of Industrial Medicine has co-operated during the installation and testing of this apparatus so as to render it safe in operation. Final tests are not yet completed.

7. LEAD

One case of lead poisoning occurred during this period in a man engaged in the manufacture of batteries. This case responded well to versenate therapy and has been re-employed by his firm.

An interesting situation arose in a large up-country newspaper where a stereotyper developed quite severe effects from lead absorbtion. This man is not responding very satisfactorily to treatment, but high levels of excretion of lead were obtained. A complete survey of the firm concerned was undertaken though no overt trouble was obvious, the machinery left much to be desired. A new plant with efficient exhausts and closed melting pots is shortly to be installed.

8. PARATHION

A supply of the cholinesterase reactivator, 2 PAM (2 pyridine aldoxime methiodide) was obtained through the advice of this Division and supplies were made available to several hospitals serving areas were parathion is used.

9. CARBON MONOXIDE

Several investigations were again made this year into the use of petrol driven machinery in the holds of ships. In the case of bulk cargo such as phosphate rock, potassium chloride and the like, small bulldozers and end loaders heap the material for removal by grabs. In several instances concentrations of carbon monoxide in excess of those recommended for safe exposure were found despite the use of mechanical ventilation of the holds. The use of petrol-driven fork-lifts, cranes, loaders, &c., in wharf sheds was also investigated.

This is a situation which is potentially troublesome and constant vigilance is necessary. The Division would welcome the introduction of electrically operated machinery in these situations, a practice which is common overseas and in some other Australian ports.

10. PUBLICATIONS

"Parathion—Its Uses and Hazards with a Report of a Fatal Case of Poisoning"—Medical Journal of Australia, July 19, 1958, in association with W. P. Bottomley.

"An Unusual Dermatitis"—Medical Journal of Australia, July 5, 1958, in association with A. R. Brimblecomb.

Pamphlets and articles for lay groups:

"Lead Poisoning"—Producer's Review for December, 1958.

"Luminising for Jewellery Trade."

Addresses were given to several organisations including one on "Health Hazards in Industry" to the Health Inspectors' Association and a talk to a group of radiologists on "Aspects of Silicosis."

11. CONFERENCES

A National Safety Conference was attended at Canberra in September, 1958. It is expected that a pattern of approach to the problem of Accidents in Industry will evolve out of the discussions held. Certainly, the figures produced are alarming when viewed as group evidence of carelessness or tragedy. A strenuous effort by management, unions, employees and interested governmental agencies is indicated on a co-operative and united front.

12. ANALYSES

More attention to analysis of situations of special hazard should be undertaken. These comprise such matters as lead in air, ozone estimations, hydrocarbon breakdown products, mercury vapour, &c. Apparatus for the estimating of lead in air has been ordered to enable investigations into the lead content of air in relevant industries to be made.

A spectrophotometer is expected soon and will be useful to all departments.

13. WEIL'S DISEASE CAMPAIGN

During the period under review the activities of the section remained unchanged with the inspection of canefields for potential health risk being carried out from June to December, and farm inspections for the remainder of the period with regard to rat control operations.

The staff remained unaltered with three field inspectors actively engaged and part time field inspection duties by the Officer in Charge who is also responsible for the administration of the section. Active control was exercised by the field staff in the Tully, Innisfail, Babinda, and Mulgrave districts with visits to Ingham, Mossman and Hambledon.

From all aspects, the harvesting season could be considered the best for many years. Although rainfall had been substantial early in the year, the rate of fall allowed adequate drying out of the cane and ground surface. This fact, coupled with an ideal handling crop having little lodged cane, allowed harvesting to proceed apace with burning being only slightly impeded throughout the entire crushing period. High crushing rates were maintained and all mills had completed operations by Christams. Rat infestation in all areas was at an all time low level and burning figures for health reasons were one of the lowest on record.

Cases of leptospirosis were sporadic in all areas and in view of the/ideal field conditions are regarded as well below normal incidence. This is in distinct contrast to the 1957 season when epidemics occurred following continuous wet weather up to harvesting. This would serve to illustrate the need for rat control, attention to adequate systematic baiting and good farming practice and hygiene. The necessity of having the moisture content of both soil and trash removed or minimised by the action of the natural agencies of sunshine and wind before and during the harvesting season assisted by adequate and improved drainage of farms is evident.

Because of adverse markets considerable areas of cane were left unharvested. Fortunately, from the health point of view, the bulk of this was destroyed. Such fields provide an ideal harbourage and breeding area from which rats radiate to adjoining fields if rat control measures are unsatisfactory which is invariably the case. It is anticipated that at the close of the 1959 season further areas will be left unharvested which will provide a definite health hazard if neglected for any length of time.

From January to June, 1,753 farm to farm inspections were undertaken from the rat control aspect in respect of harbourage eradication and rat baiting by farmers and the maintenance of a high standard of farm hygiene generally. Prolonged wet weather, however, considerably hampered operations in this regard and an increased rat population is expected as the 1959 harvesting season progresses. Leptospirosis is likely to increase should the prevailing wet field conditions continue.

Pest Board Activities.—There has generally been a slight decrease in the number of baits distributed for rodent control, although it is pleasing to note that new media and rodenticides are being tested under local field conditions by some boards. Others again, follow the same pattern year after year, and some preach biological control as an excuse for the minimum of effort made. Whilst biological control no doubt has its place it is much too slow in its action when one considers the remarkable fecundity and rapid multiplication of rodent populations. Natural control can be substantially assisted by adequate baiting to maintain populations within reasonable numbers. The claims made on economic grounds against any increased rat control are hard to correlate when one considers expenditure for control against the losses incurred which have been substantial in past years. It has apparently been forgotten by some that good health is not a purchasable commodity to be measured in terms of Pounds, shillings, and pence. In the overall picture of pest control activities in sugar industry very little attention and time is given to this important field of pest control in practice and some of those who profess to know often offer advice which is in conflict with that needed for health requirements.

Harvesting.—The labour position remained normal and a large crop was harvested in record time. The time-honoured apparel of shorts, singlets, and sandshoes as worn by the cutters was again much in evidence. Whilst this practice can be condoned during fine dry weather, it is inviting infection under wet conditions especially when fields are boggy and cane cannot be burned effectively before harvest. Under wet conditions it is considered that a weak link in control is created by the non-observance of advice given by the field inspectors in this regard. Education, without enforcement authority, is not as successful as hoped for and this is to be regretted.

Cases of soil pollution continued to be found and the standard of barrack hygiene left much to be desired.

Local Authority.—In most cases Local Authorities are taking action with regard to harbourage eradication on premises and the making available of free poison baits to the public on request. Refuse dumps are not being covered and consolidated as often as necessary to ensure adequate rat control. Rodent control staff could be usefully employed by most local authorities particularly in urban sections of the shire.

General.—Over the years there has been a marked decrease in the number of requests for canefield inspections by cane gangs. Perhaps the monetary gain involved has not the same appeal as in past years owing to increased wages and conditions. The knowledge that fatalities are rare and that the average inpatient stay in hospital is now rarely over a week would appear to tempt them to take the risk in preference to being stood down or inconvenienced should an order to burn for health reasons be issued.

Mechanical harvesting of cane continues to attract the attention of farmers and millers, and tests of machines are being carried out under varying conditions over a wide area of the sugar belt. Should large scale mechanical harvesting eventuate in the future, manual labour will still be required in those parts of the farms and in areas where machines cannot operate. The actual number, however, is at present a subject for conjecture.

The supply of four wheel drive vehicles to inspectors has at last filled a long felt want. They have already proved a boom especially under wet and boggy conditions and the work can now be covered with a minimum of time and effort. This should increase the efficiency of the unit.

Co-operation and contact with relevant parties to the industry has been continued and it is believed that amicable relations have generally been maintained.

TABLE LII

ANALYSIS OF WEIL'S DISEASE CAMPAIGN

Mill Area	Area Harvested	Cane Crushed	Total Cane Burned		Burned under Health Regulations (Including 10 Tons per Acre and Under)	
	Acres	Tons	Acres	Tons	Acres	Tons
South Johnstone	14,319	404,663	14,921	403,875	180	5,086
Goondi	10,615	274,990	10,558	274,497	264	4,081
Mourilyan	10,417	262,896	10,410	262,713	40	407
Tully	14,516	423,755	14,484	422,773	1,030	25,755
Babinda	13,719	361,207	13,676	360,065	2,441	64,219
Mulgrave	12,931	393,665	12,919	393,299	2,583	78,806
Hambledon	12,995	376,591	12,983	376,231	141	909
Victoria	25,324	720,401	25,324	720,250	49	444
Macknade	14,311	410,258	14,307	410,143	22	187
Invicta (Ingham Line only)	4,073	78,991	4,082	78,991	146	1,327
Totals	133,220	3,707,417	133,034	3,702,837	6,896	181,221

TABLE LIII

ANALYSIS OF WEIL'S DISEASE CAMPAIGN

Mill Area	Farms Inspected	Acres Inspected	Fields Inspected	Fields Burned	Canecutters Signed On	Duration of Crushing
						weeks
South Johnstone	553	3,257	560	36	440	25
Goondi	469	3,969	483	19	300	23
Mourilyan	31	208	31	2	330	23
Tully	25	160	25	5	770	28
Babinda	437	3,057	496	113	407	24
Mulgrave	13	114	13	2	695	25
Hambledon	..	..	..	..	447	27
Victoria	..	..	..	..	680	28
Macknade	..	..	..	..	334	28
Invicta (Ingham Line only)	..	..	..	..	76	23
Totals	1,528	10,765	1,608	177	4,479	..

(No inspection recorded for last four mill areas. These are no longer under resident control, inspections being carried out at the request of any interested party, cutter, farmer, or mill.)

TABLE LIV

BAITS DISTRIBUTED BY MILL PEST BOARDS FOR RODENT DESTRUCTION, NUMBER AND TYPE

Mill Area	Phosphorus on Bread	Thallium Sulphate (Wheat Medium) $\frac{1}{8}$ oz.	Other
South Johnstone	..	1,413,000	..
Goondi	..	1,100,000	..
Mourilyan	25,000	4,520,000	..
Tully	..	315,000	15 lb. Phosphorus (paste)
Babinda	230,000	743,400	..
Mulgrave	..	795,008	..
Hambledon	..	923,648	12 lb. " Sorexa " (Warfarin)
Victoria	..	2,019,700	..
Macknade	..	1,923,400	145 lb. " Sorexa " (Warfarin)
Mossman	..	652,000	..
Invicta (Ingham Line only)	..	75,000	..
Totals	255,000	14,480,156	

DIVISION OF MATERNAL AND CHILD WELFARE

Director: H. C. Murphy, M.B., B.S.

Deputy Director: J. McFarlane, M.B., B.S.

Part Time Pre-School Health Officer: A. E. Paterson, M.B., Ch.M.

Superintendent: A. D. Jenkinson, A.T.N.A.

Deputy Superintendent: M. F. Nixon, A.T.N.A.

This year, Queensland is celebrating 100 years of Self-Government. The progress made in those hundred years is reflected in every sphere of the States activity. In the demographical field the story of progress is a remarkable one.

In the year 1860 the following statistics were recorded:—Number of births 1,236; birth rate 47·9; number of infant dealths 141; infant mortality rate 114·1 per thousand live births.

In the year 1958—33,872 births were recorded, the birth rate being 23·9, the number of infant deaths was 657 and the infant mortality rate 19·4 per thousand, the lowest ever recorded in the State.

Concerning maternal mortality, statistics for the year 1872 are the first reliable ones available and the maternal mortality rate for that year was 5·1 per thousand live births. There was very little improvement in mortality rate until 1940 when the rate was 4·7 per thousand. Since then there has been a marked decline in the rate, and in 1958 it was 0·47, the lowest ever recorded.

The graph of the mortality rates shows the remarkable improvement, particularly in maternal mortality since 1930. This reduction was contributed to by the introduction of sulphonilamides into Queensland in the mid-thirties and penicillin in the mid-forties. A higher standard of obstetrical training, better hospital facilities, a decrease in domiciliary practice, better ante-natal supervision, and improved nutritional standards also were contributing factors in reducing maternal mortality, together with the work carried out by the Maternal and Child Welfare service since its establishment in 1918 of educating mothers in the nutrition, care and management of their children.

In the table of infant death rates from selected causes, the death rates in Queensland are compared with those in Australia, England and Wales, Canada, New Zealand, U.S.A. and the Netherlands.

In the light of present medical knowledge next to nothing is known as to the causation of congenital malformations, and, as one would expect, there is not much variation in the incidence in the various countries. When dealing with birth injuries and post-natal asphyxia which do reflect to some extent the standard of obstetrical skill during labour, the Queensland figures are more than comparable with those of any of the other countries. With the exception of the Netherlands and the New Zealand (European) figures, the deaths from prematurity in Queensland are comparable with those in other countries, and much better than the United States figure.

These four causes of infant mortality, viz.: congenital malformations, birth trauma, post-natal asphyxia and immaturity are the hard core of infant mortality and have not shown any improvement in the past nine years as can be seen from the table showing the major causes of death in Queensland in the first year of life from 1950–1958. Nevertheless when compared with statistics from other countries as has been done Queensland statistics are comparable with the best obtainable.

Conference on Maternity Care

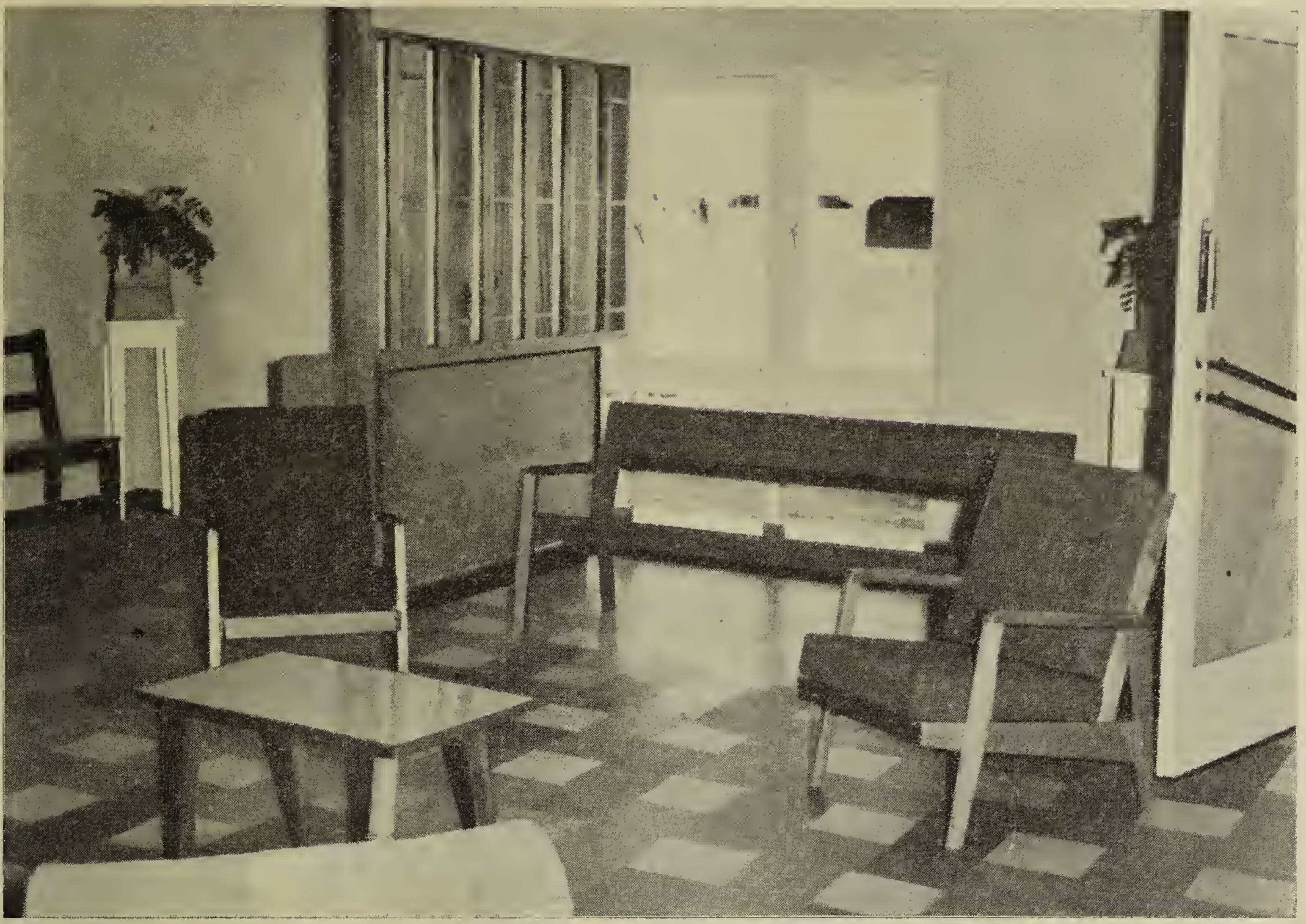
From 9th–20th March the Director participated in a Conference on Maternity Care, sponsored by the Western Pacific Regional Division of the World Health Organisation. The following countries were represented—

> Australia, New Zealand, Cambodia, Taiwan, Malaya, Fiji, French Polynesia, Hong Kong, Japan, Korea, Netherlands, New Guinea, Philippines, Sarawak, Singapore, Territory of Papua and New Guinea, and Vietnam.

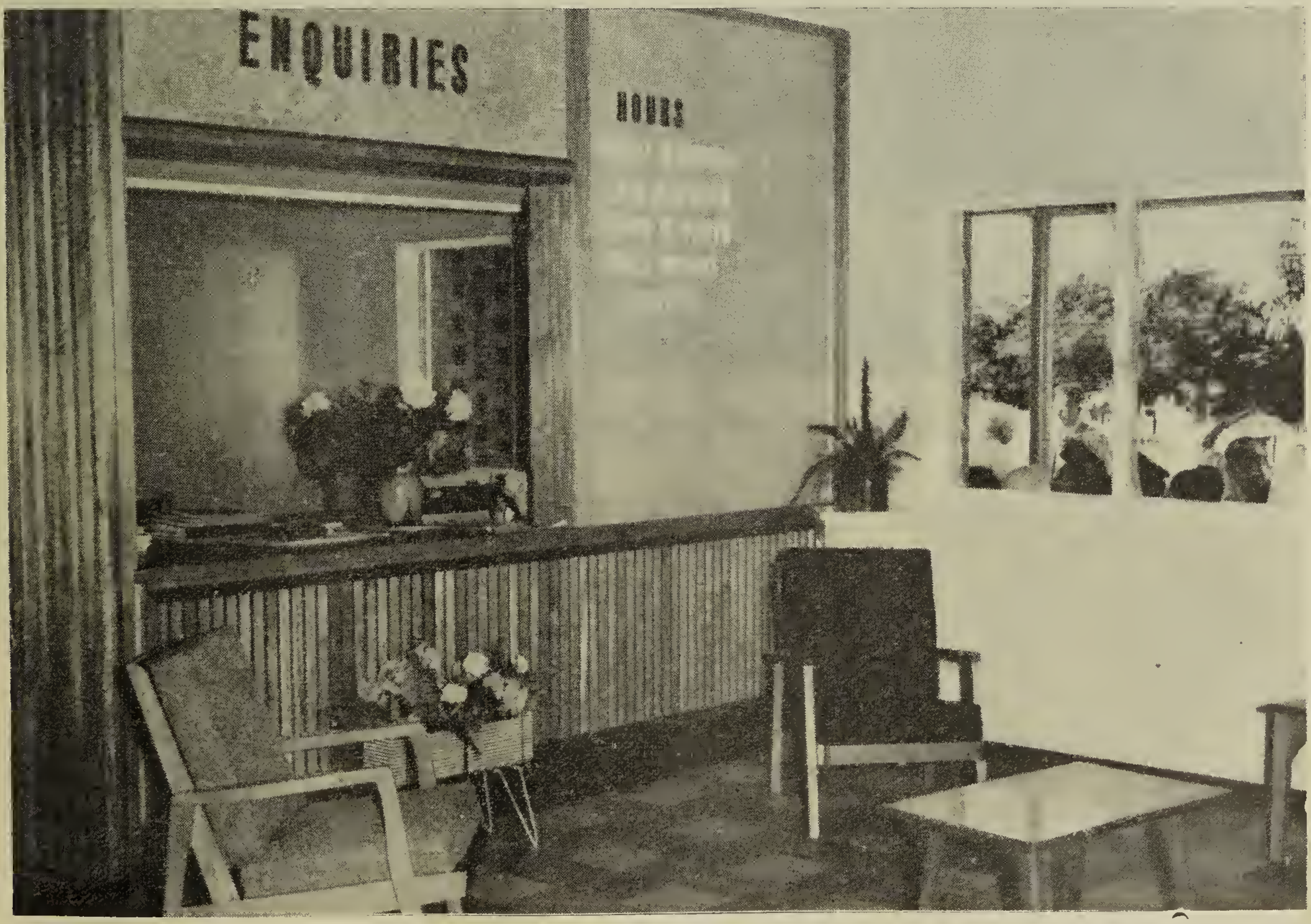
Maternity Care was discussed under the following headings:—

1. Basic elements in Maternity Care Services in terms of current practices and local needs.
2. Practical consideration of ways and means of progressive improvement in maternity care.
3. The preparation and effective use of personnel concerned with maternity care.
4. Maternity care as an integral part of the overall health programme.

After learning of the difficulties confronting many of the participating countries, one could not help but feel that the people of Australia, and Queensland in particular, have a Maternity Care Service at least equal to that provided in any other country in the World.

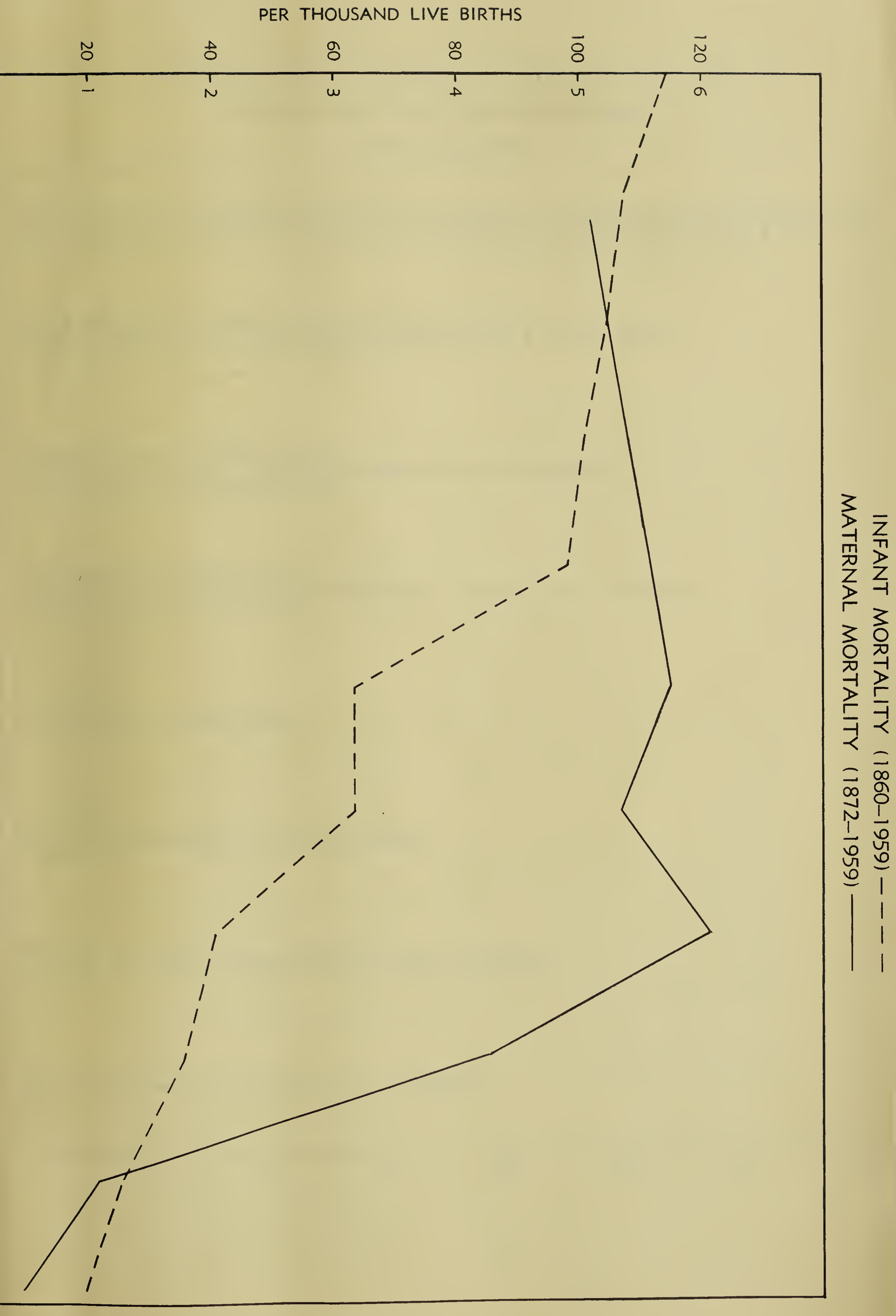


New Centre, Gladstone—Waiting Room.

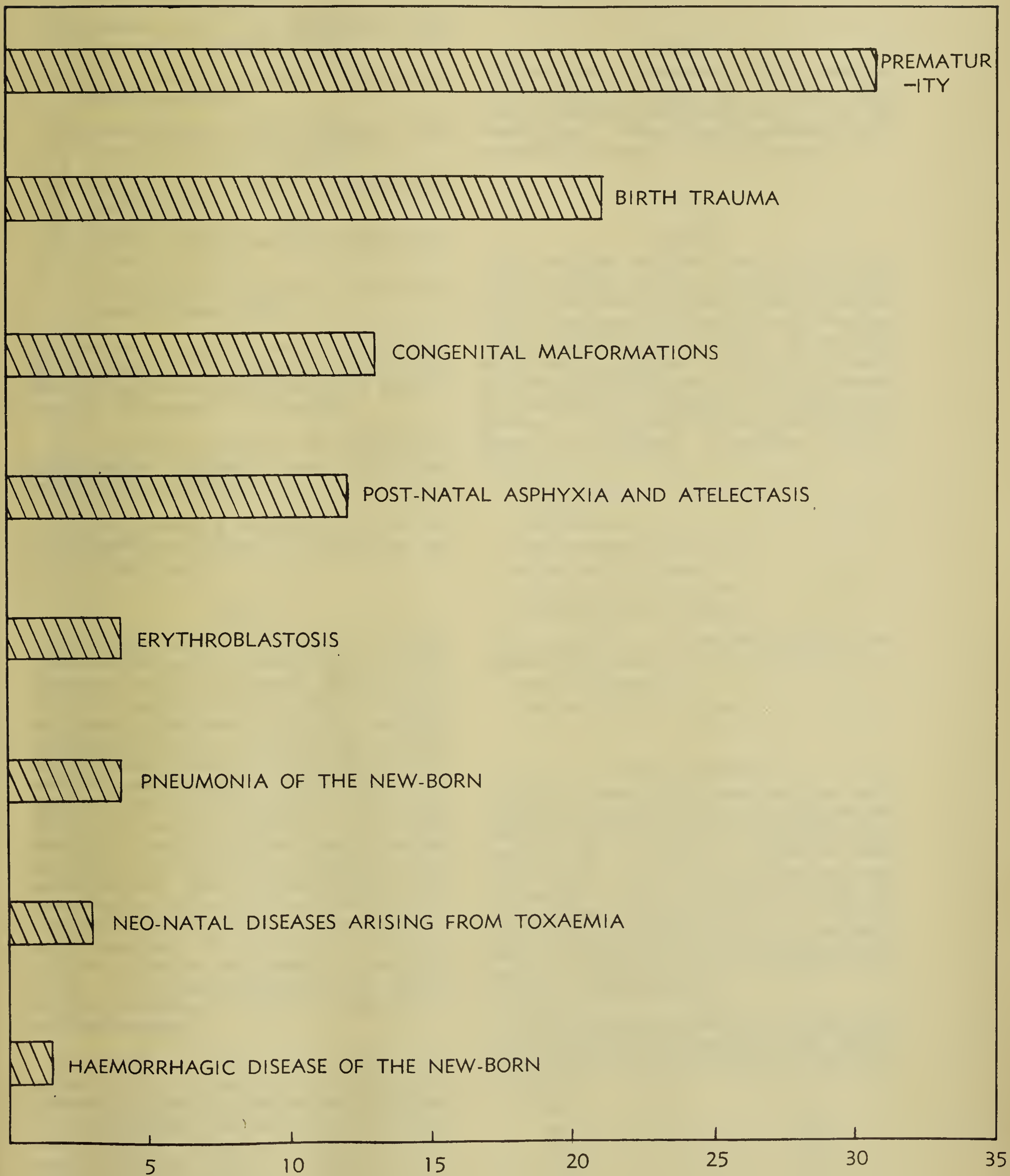


New Centre, Gladstone—Admission Office.

New Centre, Gladstone.


INFANT MORTALITY (1860–1959) – – – –
MATERNAL MORTALITY (1872–1959) ———
PER THOUSAND LIVE BIRTHS
120
100
80
60
40
20
6
5
4
3
2
1

MAJOR CAUSES OF DEATH IN FIRST MONTH OF LIFE (QUEENSLAND 1950–1958) PERCENTAGE OF TOTAL DEATHS



THE YEAR'S WORK

Throughout the State there are now 242 Centres and Sub-Centres, 68 being in the Metropolitan area and 174 in the Country.

The following Sub-Centres were opened during the year:—

(1) Tarragindi on 19th August, 1958, serviced from Woolloongabba.

(2) Kenmore on 21st November, 1958, serviced from Herschell Street.

(3) Talwood on 1st December, 1958, serviced from Goondiwindi.

(4) Inala Heights on 20th February, 1959, serviced from Herschell Street.

(5) Koongal on 5th May, 1959, serviced from Rockhampton.

(6) Wacol on 29th May, 1959, serviced from Herschell Street.

(7) Everton Park on 2nd June, 1959, serviced from Fortitude Valley.

On Monday, April 20th, the new Clinic Building at Gladstone was officially opened by the Minister for Public Works and Local Government, the Honourable J. A. Heading.

Cars have been allotted to the Emerald and Roma Centres, eliminating a great deal of long uncomfortable travelling.

The total number of attendances for the year was 463,499, an increase of 19,803 on the previous year's figures.

STAFF

The trained nursing staff position as a whole is not satisfactory for a health service which is responsible for State-wide parent education in the care and management of their children's physical and mental development, from the ante-natal period until school age. Until all senior positions and most other positions are held by permanent staff, who have the suitable qualifications for this specialised and important work, the trained staff position will not be satisfactory. The main obstacle to procuring and maintaining a suitable and stable staff, is the lack of adequate staff accommodation. This is gradually being overcome, but the position will continue and could deteriorate unless the accommodation problem is quickly overcome. The population is increasing and will necessitate the opening of new sub-centres. It is extremely difficult for this Service to attract suitable staff when better amenities are provided elsewhere.

The number of trained nursing staff at the present is 147, of whom 65 are members of the permanent staff and 82 temporary staff. The staff in the metropolitan area consists of 70 (27 permanent and 43 temporary). In the country centres and Homes there are 77 Sisters (33 permanent and 44 temporary). During the year, 4 permanent members stationed in country centres resigned, 3 to join other fields of nursing, and one to be married; 3 retired and another is on extended sick leave; eleven new members were appointed, and 5 were appointed on probation.

VITAL STATISTICS

During the year 1958, 33,872 births were registered, an increase of 109 over the previous year. There were 17,443 males and 16,429 females born, giving a masculinity rate of 106·2. The natural increase of 22,417 was equivalent to 1·6 per cent. of the population. The birth rate for 1958 was 23·9 per 1,000 mean population, compared with 24·2 in 1957.

MARRIAGES

Registration of marriages in 1958 numbered 10,255, giving a marriage rate of 7·3 per 1,000 mean population, compared with 7·4 in the previous year. Minors married numbered 4,971 comprising 989 males and 3,982 females.

DEATHS

Maternal

The maternal mortality rate was 0·47 per 1,000 live births compared with 0·62 in 1957, and was the lowest ever experienced in Queensland. There were 16 deaths during the year caused by diseases and accidents of pregnancy and childbirth. Of these, 8 were due to complications of childbirth and 6 were due to diseases and accidents of pregnancy (excluding two abortions). The causes of the 8 deaths due to diseases and accidents of childbirth were as follows:—

Placenta Praevia or Antepartum Haemorrhage	2
Retained Placenta	1
Other Postpartum Haemorrhage	1
Delivery with other trauma	2
Puerperal Pulmonary Embolism	1
Other complications of childbirth	1

The causes of the 6 deaths due to diseases and accidents of pregnancy were as follows:—

Toxaemias of pregnancy	3
Other complications of pregnancy	3

Infantile Mortality

Deaths of infants aged under one year numbered 657, comprising 389 males and 268 females, compared with 732 in 1957. The infantile mortality rate was 19·4 deaths per 1,000 live births compared with 21·7 in 1957 and was the lowest ever recorded. In the metropolitan area the rate decreased from 18·9 in 1957 to 17·8. The sub-tropical (non-metropolitan) area rate decreased from 22·8 in 1957 to 18·2 in 1958, while in the tropical area the rate decreased from 23·8 to 23·4 per 1,000 live births.

The total number of deaths due to prematurity (unqualified) was 139 compared with 163 in 1957. Deaths from prematurity since 1950 were as follows:—

1950	155
1951	153
1952	187
1953	145
1954	185
1955	137
1956	188
1957	163
1958	139

The decrease of 24 deaths in the present year was due principally to improvements in the figure for the sub-tropical area of the State where there were 22 fewer deaths recorded than in the previous year.

Deaths of Children Aged One Year and Under Five Years

(*a*) Deaths of children aged one year and under two years during the year 1958, numbered 52, representing a death rate of approximately 1·6 per 1,000 children in that age group. There were 64 deaths in 1957.

The chief causes of death were:—

Accidents		15
Pneumonia—		
Bronchopneumonia	4	9
Other Unspecified	5	
Congenital Malformations		5
Gastroenteritis and Colitis		5

Of the 15 deaths (10 males, 5 females) due to accidents, seven were caused by drowning, two by accidental poisoning, one by traffic accident, three by motor-vehicle (non-traffic) accidents, one by accidental mechanical suffocation, and one by snake bite. Of the two deaths due to accidental poisoning, one was caused by a drug, and the other by an unspecified poison.

(*b*) The deaths of children aged two and under five years during the year numbered 91, representing a death rate of approximately 1·0 per 1,000 children in that age group. Deaths in 1957 were 83.

The chief causes of death were:—

Accidents	24
Congenital Malformations	5
Pneumonia (all kinds)	4
Malignant Neoplasms	13
Gastroenteritis and Colitis	4
Meningitis (Non-Meningococcal)	4
Nephritis and Nephrosis	3

Of the 24 deaths due to accidents, six were caused by motor traffic accidents, seven by drowning, one by burns and scalds, three by accidental poisoning, two by motor-vehicle (non-traffic) accidents, one by electrocution, and one by snake bite.

Accidental Deaths of Children Aged One and Under Fifteen Years

Accidental deaths of children in this age group numbered 93 in 1958, compared with 89 in 1957, and an average of 88 in the nine years 1950 to 1958, inclusive. The total deaths of children in this age group from all causes were 282, of which 33 per cent. were caused by accident.

ST. PAUL'S TERRACE HOME

Two hundred and twenty-two babies and ninety mothers were admitted during the year, the daily average being—mothers 3·7, babies 13·6.

Babies admitted have included—Twins (11 sets), hare lip and cleft palate, fibrocystic disease of the pancreas, congenital heart conditions, one baby with multiple abnormalities including the Pierre Robin syndrome, a microcephalic, one case of Pink Disease, 3 mongols, and one hydrocephalic infant who was transferred from the Brisbane Children's Hospital after a shunt operation, and one baby who had a congenital shortening of the oesophagus with two-thirds of the stomach in the thoracic cavity.

Babies have been admitted from the following places:—Rochedale, Tara, Longreach, Toowoomba, Texas, Southport, Goondiwindi, Wamuran, Lismore, Waterford, Gordonvale, Goomeri, Bundaberg, Capalaba, Caboolture, Gladstone, Townsville, Mary Kathleen.

ST. PAUL'S TERRACE HOME TRAINING SCHOOL

In July 1958 thirty-three (33) students were successful in gaining their Certificates. At the Graduation Ceremony the Honourable the Minister, Dr. H. W. Noble, presented the Certificates.

In January 1959 thirty-three (33) students again were successful in gaining their Certificates. At the Graduation Ceremony Mr. S. D. Tooth, M.L.A., presented the Certificates.

CLAYFIELD HOME

One hundred and ninety-five babies and sixty-six mothers were admitted during the year, the daily average being—babies 13·65, mothers 3·0.

Babies were admitted from the following places:—Kingaroy, Blackbutt, Biloela, Aramac, Mundubbera, Ingham, Goondiwindi, Southport, Glamorgan Vale, Townsville, Mitchell, Charleville, Mackay, Rabaul, and Brisbane.

Reasons for admission included overstimulation, vomiting, prematurity, establishment of breast feeding, sudden illness in mothers with very young infants, congenital heart conditions, hare lip and cleft palate, cretinism, and malnutrition.

CLAYFIELD HOME TRAINING SCHOOL

Twelve trainees presented for examination in November, and eleven were successful.

In May seven girls sat for their examination and five passed.

The combined Ipswich–Clayfield Graduation Ceremonies were held in December and May, and Certificates were presented by Mr. S. D. Tooth, M.L.A., and Mr. A. T. Dewar, M.L.A.

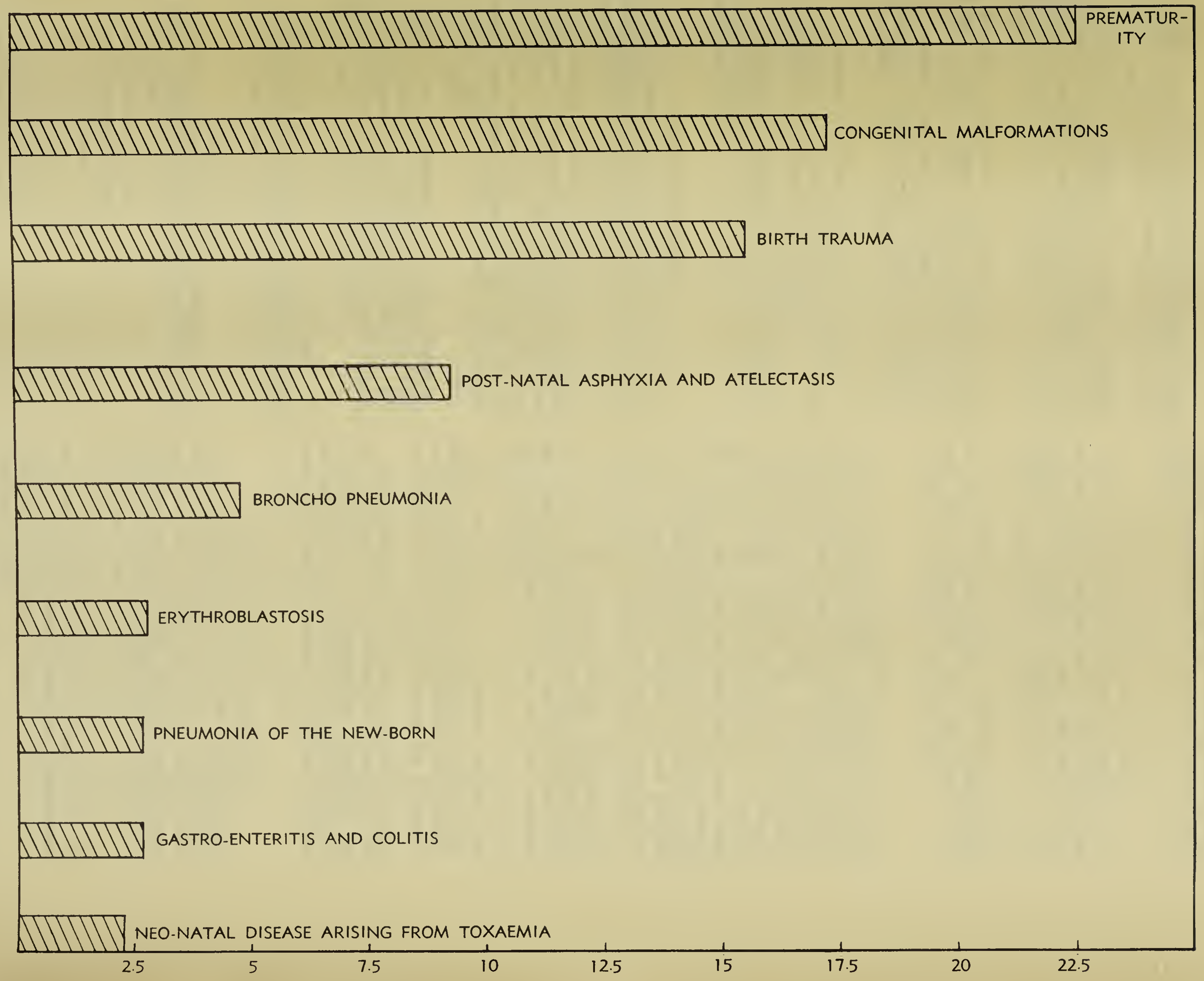
IPSWICH HOME

During the year 143 babies and 91 mothers were admitted, the daily averages being—mothers 3·57, babies 7·58.

The difficulties necessitating admission included —premature babies (44), overstimulation, defective lactation, mongolism, pyloro-spasm, pyloric stenosis, food allergy and malnutrition.

Babies were admitted from Ipswich, Mt. Crosby, Milbong, Harrisville, Boonah, Kalbar, Stanthorpe, Brisbane, Redbank, Goodna, Wacol, Laidley, Lowood, Mt. Berryman, Junction View, Toogoolawah, Marburg, Roadvale, and Rosewood

MAJOR CAUSES OF DEATH IN FIRST YEAR OF LIFE
(QUEENSLAND 1950–1958) PERCENTAGE OF
TOTAL DEATHS



IPSWICH HOME TRAINING SCHOOL

Eight trainees were prepared for examination during the year, all of whom were successful and were presented with their Certificates at the combined Graduation Ceremony.

TOOWOOMBA HOME

Admissions during the year were babies 168, mothers 55, the daily averages being babies 13·87, mothers 1·57.

Reasons for admission were many, including prematurity, mongolism, congenital heart conditions, vomiting, malnutrition, restoration of breast feeding, and management of sudden weaning.

Babies were admitted from Stanthorpe, Goondiwindi, Texas, Dalby, Roma, Oakey, Crow's Nest, Thallon, Moola, Cambooya, Fairyland, Cunnamulla, Warwick, Meringandan, Mt. Tyson, Jondaryan, Helidon, Cecil Plains, St. George, Chinchilla, Jimbour, Springsure, and Gatton.

TOOWOOMBA HOME TRAINING SCHOOL

During the year nine candidates sat for final examinations and eight were successful.

A Graduation Ceremony was held in December, the Certificates being presented by Mr. R. Anderson, M.L.A.

ROCKHAMPTON HOME

One hundred and seven babies and 56 mothers were admitted during the year, the daily average being—babies 8·41, mothers 2·71.

Thirty-three premature babies were admitted, 3 just over three pounds. Many of these babies needed tube feeding. Other reasons for admission were—malnutrition, congenital heart conditions, cleft palate, pyloro-spasm, food refusal, weaning, fighting the breast, and restoration of breast feeding.

Babies were admitted from—Rockhampton, Mackay, Gladstone, Longreach, Blackall, Pine Hill, Springsure, Alpha, Baralaba, Bororen, Mt. Larcom, Wowan, Nebo, Thangool, Bajool, Moura, Marlborough, Yeppoon, and Emu Park.

ROCKHAMPTON HOME TRAINING SCHOOL

Six trainees were successful in gaining Certificates, and the usual evening parties were held.

SANDGATE HOME

The year commenced with 50 children in residence. Admissions for the year were 828, made up as follows:—

Boys 1½ years to 5 years	215
Boys 5 years to 10 years	180
Boys over 10 years	37
Total boys	432
Girls 1½ years to 5 years	187
Girls 5 years to 10 years	187
Girls over 10 years	22
Total girls	396

Average duration of residence of each child 21 days. Daily average 49·21. Total number of families admitted 321.

Outbreaks of chicken pox, mumps and enteritis occurred during the year.

The usual Christmas festivities were held including the Annual R.A.C.Q. picnic at the Wading Pool.

Religious facilities have been provided as in previous years and older children have attended school.

SANDGATE HOME—BABY WARD

The year commenced with 15 babies in residence. One hundred and seventy-three babies were admitted during the year, the daily average being 12·9, and the average duration of each child in residence was 26·8 days.

An outbreak of measles necessitated closing the Home for three weeks. The usual crop of colds was encountered, and one toddler was transferred to Hospital with bronchitis.

ANTE-NATAL

This year 623 mothers attended the Ante-natal Clinics—359 at Woolloongabba, 214 at Fortitude Valley, and 50 at Caboolture. At Woolloongabba the daily average of attendances has varied between 40 and 80 and the Tuesday morning Clinic begun last year for first attendances has been used for subsequent as well as first visits, the average attendance now being 20. The physiotherapy classes and the lectures to expectant mothers have been well attended and it is particularly pleasing to have mothers (approximately half) attending for these lectures who have been referred by their own doctors.

For the last two months the Ante-natal lectures have been given by the Sister in Charge of the Centre instead of the Ante-natal Sister; this has been necessary to cope with the increased Clinic attendances.

Salk vaccination for expectant mothers was ceased in April, as by this time most of the mothers were found to be receiving Salk locally, or to have had it, or, not to want the injections.

Approximately 50 per cent. of mothers return for Post-natal examination, and part of this examination is a haemoglobin estimation for mother and baby. This has been found beneficial, particularly for the babies—a number of whom have been found to be anaemic.

PRE-SCHOOL HEALTH CENTRES

At the sixteen centres and seven kindergartens, children from the age of one to six years were examined twice during the year at most centres. Appointments at Valley and Herschell Street Clinics, are at eight monthly intervals; at Ipswich appointments are at nine monthly intervals.

The total number of examinations during the year was 5,386, of which 2,329 were first examinations and 3,057 were subsequent examinations. The total examinations during the previous year numbered 5,307.

Despite epidemics of measles in October and November, 1958, and influenza in March, April, and May, 1959, overall attendance has been satisfactory. During the year the daily average per Clinic was 17·3. Attendance at West End continues to be disappointing, and at Inala Centre there was a slight increase in the number of subsequent visits to the clinic. Clinics were closed between 12th December, 1958, and 12th January, 1959.

Four hundred and sixty-four blood counts, 28 specimens of urine, 7 rectal swabs, 5 specimens of faeces for fat analysis were examined at the Laboratory of Microbiology and Pathology.

Thirty-eight children were referred to hospital for treatment, 32 to their own doctor, 7 to the X-ray Department, 2 to Radium Institute, 3 to the Speech Therapy Clinic, 10 to the Child Guidance Clinic, 1 to the Accoustic Laboratory, 5 to their own dentist, and 1 to the Chest Clinic.

Of the 382 toddlers who had blood counts done, 19 had haemoglobin levels below 10 gms. per 100 mls.

COUNTRY CENTRES

The total number of examinations of toddlers at country centres is as follows:—

Centres	New Patients	Subsequent Visits	Total Visits	Number of Clinics	Average per Clinic
Cairns	216	195	411	36	11·4
Rockhampton	209	31	240	24	10·0
Toowoomba	24	59	83	20	4·1
Townsville	157	107	264	23	11·4

Eight children were referred to their own doctor for treatment, 4 to hospital and 1 to the Physiotherapy Clinic. Total attendances at the Metropolitan and Country Centres were 6,390.

Kindergartens Controlled by the Creche and Kindergarten Association

Children attending Valley, Paddington, West End, and Rosalie, were medically examined twice during the year at the Kindergarten.

Kindergartens Affiliated with Creche and Kindergarten Association

Children attending Wynnum and Holland Park were examined at the Kindergarten twice during the year. Children from Ashgrove Kindergarten, Devoy Street, were medically examined once during the year.

Kindergartens Directed by Department of Public Instruction

Children attending West Ashgrove Kindergarten were medically examined twice during the year at the Kindergarten. Children from Ipswich Kindergarten attend Toddlers' Clinic, Ipswich, for half-yearly medical examinations.

DIRECTOR'S CONSULTANT CENTRE

Attendances during the year ended June 1959, were as follows:—

Number of children examined for admission to Sandgate Home	1,460
Number advised per phone	718
Attendance at Director's Consultant Centre for advice	2,369
Total number of children examined or advised at Centre	4,547

Three hundred and eighty-seven blood counts (249 babies, 138 toddlers), 41 urine specimens, 13 cellophane swabs, 18 specimens of faeces for fat analysis, 101 rectal swabs (for 64 children) were examined at the Laboratory of Microbiology and Pathology.

Forty-two children and babies were referred to Hospital, 26 to their own doctor, 8 to the radium clinic, 6 to X-ray Department, 6 to the Child Guidance Centre, 5 to the Speech Therapist, 3 to the Chest Clinic, 2 to the Accoustic Laboratory, and 2 to the Dental Hospital.

Of the 249 babies and 138 toddlers who had blood counts done, 27 babies and 4 toddlers had haemoglobin levels below 10 gms per 100 mls.

Of the rectal swabs examined 5 gave positive swabs for salmonella, and 31 positive swabs for coliform bacilli.

SISTER LECTURER'S SECTION

The Mothercraft teaching in schools for the year ending 1957–58 was satisfactory. In most schools the number of girls taking Mothercraft Lessons has increased and it was necessary to have more classes. However, only those girls taking full Commercial Course received Mothercraft Lessons at the State Commercial High School, while at the Brisbane State High School approximately one-third of the girls in the Sub-Junior year attended.

At the two recently opened High Schools, Redcliffe and Balmoral, Mothercraft Lessons were given. The Principals have been co-operative in arranging suitable time tables.

Examination results were satisfactory, 90 per cent. of the girls obtained Certificates. One thousand five hundred and seventy-five (1,575) papers and Mothercraft Books from the Metropolitan Area, and sixty-nine (69) from Country Centres, were examined.

CORRESPONDENCE SECTION—POST-NATAL

There is a slight decrease in the number of Birth Notifications received.

There is a slight increase in the number of response to Circular No. 2 (unable to attend). Letters for advice re feeding and management are slightly less. Advice has been requested from mothers in New Guinea and the Solomon Islands, and this has been forwarded by Air Mail.

The number of telephone calls received from mothers needing advice shows a marked increase.

The usual lists of births and deaths are sent regularly to City Council and Health Departments as soon as they are received.

TABLE LV

CORRESPONDENCE SECTION—ANTE-NATAL

—	Year Ending 30–6–1958
Circular letters forwarded to expectant mothers (No. 1)	4,701
Circular letters forwarded to expectant mothers (No. 2) *re* " The Expectant Mother " book	2,844
Response to circular letters	1,436
Serial letters to expectant mothers	10,535
Letters received from expectant mothers	482
Special letters of advice sent on request	136
Copies of " The Expectant Mother " sent on request	1,283
Requests from country centres and hospitals for " The Expectant Mother " book	3,060
Copies of " Ante-natal and Post-natal Exercises " sent on request to expectant mothers	1,301
Requests from country clinics for " Ante-natal and Post-natal Exercises "	2,799
Copies of baby patterns sent on request	86
Copies of maternity belt patterns sent on request	52

CORRESPONDENCE SECTION—POST-NATAL

—	Year Ending 30–6–1959	Year Ending 30–6–1958
No. of Birth Notifications received	5,875	6,164
No. of Circulars posted—		
(1) Within reach of a Centre	2,198	2,490
(2) Not within reach of a Centre	3,587	3,674
No. of follow-up Circulars posted	3,525	3,382
Letters to Correspondence in response to Circular No. 2	879	863
Visits to Clinics in response to Circular No. 1	444	469
Letters of advice *re* feeding and management sent on request	1,299	1,689
No. of " Care of Mother and Child " sent on request	878	926
No. of extra " Care of Mother and Child " sent on request	139	107
No. of pamphlets sent advising Triple Antigen Immunization	6,322	6,164
No. of Birthday Cards sent during the year	189	203
No. of Telephone calls received *re* feeding and management	376	186

SOCIAL WELFARE SECTION

The St. Andrew's Hospital visiting commenced on 8-10-58.

This year there has been an increase in the Social Service visits and a decrease in the Home visits:—

Social Service visits, 1957–58	4,073
Social Service visits, 1958–59	4,449
Number of newborns visited at Home, 1957–58	1,045
Number of newborns visited at Home, 1958–59	944
Number of newborns visited in Brisbane Women's Hospital, St. Andrew's Hospital and South Brisbane Auxiliary Hospital	11,671
Number of Test Feeds given	121

NEWSPAPER ARTICLES

As in previous years, articles of topical interest in infant and pre-school management were forwarded each month to 60 newspapers throughout the State. Subjects dealt with included—

"A note for Mothers-to-be.

Why should I breast feed my baby?

Constipation.

When should baby be weaned?

What does this rash mean?

Safety in the holidays.

Why should my child be immunised?

Your child could be poisoned in your home.

How many teeth has baby?

Winter ailments.

What should I do when my child won't eat?

Is your child a bad sleeper?"

PUBLICATIONS

Publications of the Service "Care of Mother and Child", "The Expectant Mother" and "Ante-natal and Post-natal Exercises" continue to be in heavy demand. Requests have been received from all over the States and Darwin. "Problems of Prematurity" has been altered to conform to modern practice, and will be completely rewritten during the coming year.

MEDICAL STUDENTS

As in the previous year, final year medical students attend two clinics conducted by the Director.

TABLE LVI

VISITS TO NEWBORNS, SUBSEQUENT AND TOTAL VISITS

Year	Visits to Newborns	Subsequent and other Visits	Total Visits
1956–57	27,111	1,442	28,553
1957–58	27,682	1,536	29,218
1958–59	28,394	1,527	29,921

TABLE LVII

ATTENDANCES AT CENTRES

Number of Cases seen at the Centres

	1956–57	1957–58	1958–59
Infants—			
Under one year	19,858	20,991	21,610
One to two years	5,531	5,722	6,127
Over two years	2,335	2,555	2,675
Total	27,724	29,268	30,412
Expectant mothers	1,069	1,121	1,294
Total now cases	28,793	30,389	31,706

TABLE LVIII

ATTENDANCES OF INFANTS AND CHILDREN AT MATERNAL AND CHILD WELFARE CENTRES AND SUB-CENTRES

Metropolitan

—	1956–57	1957–58	1958–59
Fortitude Valley—	15,933	17,697	16,913
Branches—			
Clayfield	891	1,198	1,184
Everton Park (opened 2–6–59)	..	..	115
Hamilton	1,728	1,455	1,701
Hendra	1,522	1,282	1,328
Newmarket-Grange	956	619	733
Wacol Immigration Centre	535	801	742
West Stafford	1,178	2,040	2,181
Windsor	2,477	2,617	2,684
	25,220	27,709	27,581
Herchell Street	17,045	17,854	16,109
Branches—			
Chelmer	628	1,017	932
Corinda	2,531	2,422	2,770
Darra	1,150	1,715	2,029
Enoggera	2,942	2,970	2,282
Graceville	1,899	2,406	1,860
Inala	2,294	4,248	4,253
Inala Heights (opened 20–2–59)	..	..	813
Indooroopilly	1,427	1,696	2,035
Kenmore (opened 21–11–58)	..	..	194
Mitchelton	3,000	3,076	2,872
Oxley	1,325	1,593	1,957
St. Lucia	694	855	1,303
Toowong	1,859	2,243	2,658
Wacol (opened 29–5–59)	..	..	85
	36,794	42,095	42,152
Nundah	4,532	4,986	4,719
Branches—			
Banyo	580	760	777
Chermside	2,631	3,596	3,702
Geebung	1,215	1,092	1,695
Kedron	1,666	1,830	1,652
Northgate	416	325	226
Wavell Heights	397	219	299
Zillmere	2,134	2,521	2,458
	13,571	15,329	15,528
Metropolitan—continued			
Paddington	3,299	3,745	3,999
Branches—			
Ashgrove	3,734	4,169	3,944
Bardon	998	963	1,169
Kelvin Grove	865	697	1,319
Rosalie	1,166	1,330	1,579
	10,062	10,904	12,010
Sandgate	5,971	5,481	5,198
Branches—			
Bald Hills	204	272	337
Caboolture	1,310	1,317	1,247
Clontarf (opened 1–4–58)	..	165	916
Cribb Island	302	370	343
Dayboro	326	370	237
Redcliffe	2,538	2,525	2,253
	10,651	10,500	10,531
South Brisbane Sub-centres—			
Archerfield	715	859	872
Bulimba	2,355	2,377	2,701
Camp Hill	1,993	1,476	1,441
Holland Park	2,545	2,342	2,772
Morningside	2,480	2,719	2,425
Norman Park (opened 13–2–58)	..	216	948
Stones Corner	924	32	1,060
	11,012	10,921	12,219
West End	6,760	6,936	7,138
Branch—			
Beenleigh	862	1,090	966
	7,622	8,026	8,104
Woolloongabba	19,303	18,518	17,959
Branches—			
Belmont	685	1,576	2,065
Coopers Plains	2,197	1,983	1,951
Ekibin	2,215	2,189	1,342
Ipswich Road	1,992	1,766	1,557
Moorooka (opened 9–9–57)	..	1,649	3,610
Rocklea (closed 9–9–57)	727	88	..
Salisbury	1,977	1,474	1,495
Tarragindi (opened 19–8–58)	..	..	981
Upper Mount Gravatt	1,653	1,719	1,826
Yeronga	1,636	1,527	1,958
	32,385	32,489	34,744
Wynnum	7,665	8,694	9,021
Branches—			
Cleveland	832	787	637
Manly	1,189	1,623	1,257
	9,686	11,104	10,915

Country

—	1956–57	1957–58	1958–59
Atherton	1,568	2,042	2,309
Branches—			
Herberton	284	136	282
Koombooloomba (opened 2–8–57)	..	125	231
Malanda	564	521	800
Millaa Millaa	422	330	534
Ravenshoe	485	746	712
Tinaroo Falls	259	263	348
Yungaburra	67	132	179
	3,649	4,295	5,395

Country—continued

—	1956–57	1957–58	1958–59
Ayr	3,986	4,148	4,296
Branches—			
Clare	296	380	294
Giru	722	819	750
Home Hill	2,495	2,532	2,345
	7,499	7,879	7,685
Barcaldine	1,602	1,783	1,848
Branches—			
Alpha	321	516	658
Aramac	308	243	359
Jericho	127	106	235
	2,358	2,648	3,100
Biloela	5,739	5,400	5,184
Branches—			
Baralaba	717	563	752
Goovigen	335	281	285
Jambin	102	95	94
Moura	315	303	247
Thangool	296	344	314
Theodore	583	579	753
Wowan	751	683	718
	8,838	8,248	8,347
Bowen	2,297	2,077	2,059
Branches—			
Collinsville	1,591	1,645	1,597
Proserpine	1,760	1,297	1,343
Queen's Beach	401	392	476
	6,049	5,411	5,475
Bundaberg	9,130	10,092	12,510
Branches—			
Gin Gin	269	263	315
Miriam Vale	324	354	300
	9,723	10,709	13,125
Cairns	11,229	12,456	12,297
Branches—			
Cooktown	138	180	161
Earlville	373	949	891
Edge Hill	707	845	998
Edmonton	378	601	581
Gordonvale	1,206	1,515	1,852
Kuranda	185	254	317
Mossman	1,622	2,036	1,926
	15,838	18,836	19,023
Charleville	3,345	3,070	3,561
Branches—			
Cunnamulla	1,507	1,636	1,568
Morven	115	108	132
Quilpie	418	422	582
	5,385	5,236	5,843
Charters Towers	3,307	3,545	3,350
Dalby	3,323	3,371	2,958
Branches—			
Chinchilla	1,193	1,304	1,582
Miles	526	683	674
	5,042	5,358	5,214
Emerald	1,608	1,622	1,763
Branches—			
Blair Athol	233	131	199
Capella	140	142	161
Clermont	414	529	650
Springsure	301	258	184
	2,696	2,682	2,957

Country—continued

—	1956–57	1957–58	1958–59
Gayndah	1,821	1,370	1,429
Branches—			
Eidsvold	312	336	304
Monto	1,791	1,329	1,120
Mulgeldie	216	104	141
Mundubbera	896	1,036	807
	5,036	4,175	3,801
Gladstone	5,062	4,752	5,288
Branches—			
Calliope	252	188	264
Mount Larcom	331	352	319
	5,645	5,292	5,871
Goondiwindi	1,831	2,703	2,907
Branches—			
Dirranbandi	502	439	625
Inglewood	456	532	653
St. George	171	648	765
Talwood (opened 1–12–58)	..	..	152
Texas	474	608	894
Yelarbon	233	397	512
	3,667	5,327	6,508
Gympie	5,386	5,988	6,362
Branches—			
Cooran	393	312	273
Cooroy	374	532	354
Imbil	576	469	515
Kandanga	187	361	293
Pomona	383	347	307
Tewantin	349	351	428
	7,648	8,360	8,532
Ingham	3,258	3,347	3,173
Branches—			
Cardwell	489	309	286
Halifax	844	1,139	678
	4,591	4,795	4,137
Innisfail	4,944	5,964	6,373
Branches—			
Babinda	943	1,114	1,203
El Arish	214	171	212
Mourilyan	341	222	314
Silkwood	235	177	187
South Johnstone	276	220	384
Tully	1,991	2,048	2,399
	8,944	9,916	11,072
Ipswich	12,578	12,920	14,107
Branches—			
Boonah	1,613	1,687	1,546
Esk	629	719	479
Kalbar	184	339	330
Laidley	676	656	592
Lowood	505	592	406
Rosewood	762	952	820
Toogoolawah	719	688	672
	17,666	18,553	18,952
Kingaroy	3,058	2,870	3,080
Branches—			
Kumbia	264	214	156
Nanango	682	790	1,026
Yarraman	190	146	290
	4,194	4,020	4,552

Country—continued

—	1956–57	1957–58	1958–59
Longreach	1,520	1,730	1,738
Branches—			
Blackall	827	1,184	1,339
Ilfracombe	19	31	36
Muttaburra ..	16	57	59
	2,382	3,002	3,172
Mackay	7,758	7,720	8,711
Branches—			
Calen	263	332	234
Finch Hatton ..	286	239	288
Koumala	258	152	240
Marian	369	351	377
North Mackay ..	2,295	1,968	1,942
Ogmore (transferred from Rockhampton 26–2–58) ..	..	63	120
Sarina	1,806	1,733	2,003
St. Lawrence (transferred from Rockhampton 12–2–58) ..	..	26	120
West Mackay ..	2,044	1,913	2,379
	15,079	14,497	16,396
Mareeba	2,972	3,769	3,741
Branches—			
Dimbulah ..	99	38	564
Mutchilba (opened 28–3–58) ..	..	35	243
	3,418	4,244	4,548
Maryborough ..	6,871	7,461	7,551
Branches—			
Biggenden ..	666	779	699
Childers	780	844	1,250
Howard	349	472	730
Pialba	531	481	730
	9,197	10,037	10,960
Mount Isa	3,938	4,821	4,988
Branches—			
Camooweal ..	30	69	65
Cloncurry ..	903	765	830
	4,871	5,655	5,883
Murgon	1,259	1,300	1,236
Branches—			
Goomeri	750	528	742
Hivesville ..	41	60	61
Kilkivan	175	194	178
Proston	231	227	291
Wondai	494	740	1,011
	2,950	3,049	3,519
Nambour	4,925	4,533	4,742
Branches—			
Buderim	151	194	131
Caloundra ..	387	408	395
Eumundi	145	152	200
Landsborough ..	264	286	281
Maroochydore ..	528	424	397
Palmwoods ..	188	163	177
Yandina	213	267	158
	6,801	6,427	6,481
Railway Car—			
Hughenden ..	1,132	1,706	1,717
Julia Creek ..	737	752	616
Maxwelton ..	172	272	303
Richmond ..	438	672	746
Winton	617	740	803
	3,096	4,142	4,185

Country—continued

—	1956–57	1957–58	1958–59
Rockhampton ..	12,058	11,642	12,221
Branches—			
Koongal (opened 5–5–59) ..	..	..	19
Mt. Morgan ..	1,761	1,716	2,040
North Rockhampton	1,220	1,523	1,265
Ogmore (to 26-2-58)	180	95	..
Park Avenue ..	725	718	637
St. Lawrence (to 12–2–58) ..	161	41	..
Yeppoon	744	902	1,052
	16,849	16,637	17,234
Roma	2,775	2,987	2,637
Branches—			
Dulacca	107	174	134
Jackson	67	95	80
Mitchell	1,487	1,512	1,409
Surat	428	212	302
Wallumbilla ..	185	249	218
Yuleba	249	240	198
	5,298	5,469	4,978
Southport	4,668	5,129	6,080
Branches—			
Beaudesert ..	1,645	1,686	2,381
Burleigh Heads ..	1,063	1,343	1,569
Coolangatta ..	3,018	2,933	2,888
	10,394	11,091	12,918
Toowoomba ..	7,262	6,630	6,402
Branches—			
Crow's Nest ..	648	653	623
Forest Hill ..	33	90	62
Gatton	1,036	1,010	978
Harristown ..	549	499	469
Millmerran ..	677	635	575
Oakey	672	817	1,007
Pittsworth ..	1,022	1,097	1,203
	11,899	11,431	11,319
Townsville	12,144	12,360	13,428
Branches—			
Garbutt	652	727	710
Gulliver	1,985	1,810	1,943
Rising Sun ..	2,178	2,633	2,361
	16,959	17,530	18,442
Warwick	4,468	4,152	4,220
Branches—			
Allora	614	607	430
Clifton	213	339	316
Killarney ..	478	511	425
Stanthorpe ..	2,505	3,033	2,775
	8,278	8,642	8,166
Social Welfare Services ..	3,444	4,073	4,449

TOTAL ATTENDANCES OF INFANTS AND CHILDREN AND EXPECTANT MOTHERS

1956–57	1957–58	1958–59
418,105	443,696	463,499

TABLE LIX

Causes of Deaths in Infants under One Year—Queensland, 1958

Cause	1957	1958				Increase or Decrease
		Metropolitan	Sub-Tropical (a)	Tropical	Total	
Immaturity (unqualified)	163	48	52	39	139	−22
Immaturity with mention of any other subsidiary condition	1	1	2	..	3	
Congenital Malformations	132	37	36	40	113	−19
Intracranial and Spinal injury at birth ..	69	22	17	29	68	− 1
Post-natal Asphyxia and Atelectasis	58	24	23	14	61	+ 3
Other birth injury	38	13	14	13	40	+ 2
Pneumonia of newborn	27	4	7	6	17	−10
Haemolytic disease of newborn (Erythroblastosis)	24	8	12	1	21	− 3
Neo-natal disorders arising from Maternal Toxaemia	10	3	2	4	9	− 1
Haemorrhagic disease of newborn	9	3	7	1	11	+ 2
Diarrhoea of newborn	..	..	2	1	3	+ 3
Other diseases peculiar to early infancy ..	32	9	15	6	30	− 2
Total Diseases of early infancy ..	563	172	189	154	515	−48
Gastroenteritis and Colitis	18	..	8	7	15	− 3
Bronchopneumonia, other and unspecified Pneumonia	46	7	19	11	37	− 9
Lobar Pneumonia..	8	..	4	3	7	− 1
Whooping Cough	4	..	..	..	..	− 4
Diphtheria..	..	..	..	..	..	..
All other causes	93	30	28	25	83	−10
Total Deaths under 1 year	732	209	248	200	657	−75

(a) Excluding Metropolitan.

TABLE LX

Causes of Deaths in Infants More Than One Month, but less Than Twelve Months of Age—Queensland, 1958

Cause	1957	1958				Increase or Decrease
		Metropolitan	Sub-Tropical (a)	Tropical	Total	
Immaturity (unqualified)	..	..	2	..	2	+ 3
Immaturity with mention of any other subsidiary condition	..	..	1	..	1	
Congenital Malformations	54	14	15	16	45	− 9
Post-natal Asphyxia and Atelectasis	4	..	..	..	..	− 4
Haemolytic disease of newborn	1	..	..	..	..	− 1
Other diseases peculiar to early infancy ..	12	..	6	3	9	− 3
Total Pre-natal Causes	71	14	24	19	57	−14
Bronchopneumonia, other and unspecified Pneumonia	46	7	19	11	37	− 9
Gastroenteritis and Colitis	18	..	8	7	15	− 3
Whooping Cough	4	..	..	..	..	− 4
Lobar Pneumonia	8	..	4	3	7	− 1
Diphtheria	..	..	..	..	..	..
All other causes	71	27	25	23	75	+ 4
Total Deaths 4 weeks and under 1 year	218	48	80	63	191	−27

(a) Excluding Metropolitan.

TABLE LXI

Causes of Deaths in Infants under One Month of Age—Queensland, 1958

Cause	1957	1958				Increase or Decrease
		Metropolitan	Sub-Tropical (*a*)	Tropical	Total	
Immaturity (unqualified)	163	48	50	39	137	−25
Immaturity with mention of any other subsidiary condition	1	1	1	..	2	
Congenital Malformations	78	23	21	24	68	−10
Intracranial and Spinal injury at birth	67	22	15	27	64	− 3
Post-natal Asphyxia and Atelectasis	54	24	23	14	61	+ 7
Other birth injury	38	13	14	13	40	+ 2
Pneumonia of newborn	27	4	7	6	17	−10
Haemolytic diseases of newborn (Erythroblastosis)	23	8	12	1	21	− 2
Neo-natal disorders arising from Maternal Toxaemia	10	3	2	4	9	− 1
Haemorrhagic disease of newborn	9	3	7	1	11	+ 2
Diarrhoea of newborn	..	..	2	1	3	+ 3
Other diseases peculiar to early infancy	22	9	11	5	25	+ 3
Total Pre-natal Causes	492	158	165	135	458	−34
All other Causes	22	3	3	2	8	−14
Totals	514	161	168	137	466	−48

(*a*) Excluding Metropolitan.

TABLE LXII

Causes of Deaths of Premature (Immature) Infants

—	1956	1957	1958
Immaturity unqualified	188	163	139
Ill-defined diseases peculiar to early infancy, with immaturity	6	16	18
Post-natal Asphyxia and Atelectasis, with immaturity	38	34	31
Intracranial and Spinal injury at birth, with immaturity	12	14	26
Other birth injury, with immaturity	29	22	24
Neo-natal disorders arising from Maternal Toxaemia, with immaturity	11	7	7
Pneumonia of newborn, with immaturity	3	3	3
Haemorrhagic diseases of newborn, with immaturity	2	..	1
Haemolytic disease of newborn, with immaturity	7	1	6
Nutritional Maladjustment, with immaturity	1	1	..
Immaturity with any other subsidiary condition	1	1	3
Umbilical Sepsis, with immaturity	1	..	1
Other Sepsis of newborn, with immaturity	..	..	..
Diarrhoea of the newborn, with immaturity	..	..	..
Totals	299	262	259
Total under one year, with immaturity	299	262	259
Total under one month, with immaturity	297	260	255

TABLE LXIII

Accidental Deaths of Children (aged 1 and under 15 years) in Queensland

—	1953		1954		1955		1956		1957		1958		Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Road Accidents	15	9	18	11	15	9	14	9	20	9	18	13	160
Firearms	3	1	5	..	2	..	3	..	..	..	3	1	18
Drowning	12	4	10	4	17	1	21	5	16	6	13	13	122
Falls	3	2	3	..	1	..	5	2	1	1	1	1	20
Other Accidents	22	19	21	13	21	18	19	17	25	11	21	9	216
	55	35	57	28	56	28	62	33	62	27	57	37	536
Totals	90		85		84		95		89		93		536

In 1958, thirty-one deaths in this age group were caused by road accidents, 18 males and 13 females. The total number of deaths was 93—4 less than the previous year—and the ratio of males to females was about 3:2.

TABLE LXIV

SUMMARY OF ANTE-NATAL CASES

—	New Patients	Subsequent Visits	Post-natal Examination	Total	Talks to Mothers	Salk
Caboolture	36	196	30	262	..	..
Fortitude Valley	146	1,357	121	1,624	450	227
Woolloongabba	343	2,631	223	3,187	450	433

—	Woolloongabba		Fortitude Valley		Caboolture	
	Multipara	Primipara	Multipara	Primipara	Multipara	Primipara
Number	285	74	149	65	38	12
Non-pregnant	5	1	1	..	..	1
Threatened miscarriage	19	5	12	4	3	..
Miscarriage	13	5	4	1	..	..
Still-birth	4	1	1	1	1	..
Neo-natal death	4	..	..	..	..	1
Toxaemia requiring home treatment	55	13	27	12	12	2
Toxaemia requiring hospitalisation	55	12	18	20	5	4
Hypertension	17	2	5	2	4	..
Toxaemia superimposed on hypertension	12	4	9	1	1	..
Severe pre-eclampsia	..	1	..	..	..	..
Post-partum eclampsia	..	1	..	..	..	..
Spontaneous rupture of uterus during labour requiring hysterectomy	1	..	..	..	..	..
Ectopic gestation	1	..	..	..	..	..
Twin pregnancy	2	..	2	..	..	2
Labour following previous caesarian section	2	..	..	..	..	..
Caesarian section for disproportion	..	1	1	..	..	..
Caesarian section for placenta praevia	1	..	..	..	..	..
Caesarian section for ante-partum haemorrhage	1	..	..	..	..	..
Placenta praevia	2	..	2	..	..	..
Cervical suture for placenta praevia	..	..	1	..	..	..
Post-maturity	8	..	7	4	2	1
Ante-partum haemorrhage	2	..	1	1	1	..
Afibrinogenaemia	1	..	..	..	..	..
Rh-ve (no anti-bodies)	30	9	18	17	4	2
Rh-ve (with anti-bodies)	1	..	..	..	1	..
Morning sickness	110	23	59	31	14	1
Vaginal discharge	36	16	18	13	8	2
Polyneuritis	13	5	4	1	2	..
Haemoglobin 13.0G	153	41	87	34	14	7
Haemoglobin 10.9G	21	2	16	2	..	..
Retroversion	7	4	7	2	..	..
Cystocoele	12	..	2	..	4	..
Rectocoele	3	..	2	..	1	..
Cystocoele and rectocoele	9	..	10	..	..	..
Bartholin's abscess	1	..	1	..	..	..
Haemorrhoids	8	1	3	2	1	..
Severe varicose veins	16	..	5	..	6	..
Thrombophlebitis	2	..	..	..	..	..
Ovarian cyst	..	..	1	..	..	..
Heartburn	14	2	10	5	..	..
Urinary tract infection	18	4	6	6	..	..
Renal glycosuria	1	..	..	1	..	..
Cardiac murmur	6	2	6	1	2	..
Hernia	2	..	3	..	..	..
Severe asthma	2	..	..	..	..	..
Carpal tunnel syndrome	..	..	1	..	..	..
Threatened suicide	..	..	1	..	..	..
Post puerperal psychosis	..	..	2	..	..	..
Bifid uterus	..	..	1	..	..	..
Colostomy associated with pregnancy	1	..	..	..	..	..
Pseudocyesis	1	1	..	..	..	1
Epilepsy	..	..	..	..	2	..
Goitre	..	..	..	..	1	..

TABLE LXV

POST-NATAL EXAMINATIONS

—	Woolloongabba		Fortitude Valley		Caboolture	
	Multipara	Primipara	Multipara	Primipara	Multipara	Primipara
Number	66	24	44	25	16	3
Retained products	7	3	3	2	1	1
Subinvolution	3	2	6	1	1	..
Retroversion	12	8	11	6	2	..
Cystocoele	2	..	..	..	1	..
Rectocoele	1	..	1	..	1	..
Cystocoele and rectocoele	5	1	4	..	..	..
Increased blood pressure	18	7	17	8	3	1
Vaginitis	5	2	3	..	..	1
Breast abscess	3	..	..	1	..	..
Multiple boils	..	..	..	1	..	..

Babies with Conditions of Special Interest

Bilateral talipes.

Oesophageal atresia (incompatible with life).

ABO group incompatibility.

3 haemorrhagic disease of newborn.

Facial palsy persistent for more than 6 months (still persistent) after a normal vaginal delivery in a primipara.

Hydrocephalus developing immediately after birth (supra-tentorial).

Erb's palsy after delivery of 8 lb. 10 oz. baby in a small primipara.

Pneumonia (probably aspiration) causing neo-natal death.

Neo-natal death of 3 weeks premature twins in a mother of poor nutrition.

A neo-natal death of one twin ; the mother was a primipara with pre-eclampsia.

1 neo-natal death following premature labour because of toxaemia and hydramnios in a primipara.

3 still-births following ante-partum haemorrhage.

1 still-birth—a grossly oedematous baby in a primipara who had a low serum protein (first came for treatment when 32 weeks pregnant).

1 still-birth at 26 weeks in a multipara who had on two previous occasions lost babies at 20–28 weeks.

1 intra-utrine foetal death of unknown etiology in a multipara ; mild toxaemia may have been a cause.

1 intra-uterine foetal death in a multipara at approximately 30 weeks with severe pre-eclampsia superimposed on essential hypertension (only clinic visit was made at 31 weeks).

1 intra-uterine foetal death at 24 weeks due to severe Rh incompatibility in a multipara.

Mothers with Conditions of Special Interest

Afibrinogenaemia in a multipara with an intra-uterine foetal death (Rh incompatibility).

Post-partum eclampsia in an unmarried primipara of 17 years, who had been under treatment in hospital for five weeks before delivery.

Ante-partum haemorrhage occuring in hospital in a multipara under treatment for essential hypertension. Caesarian section gave a live baby.

PRE-SCHOOL CENTRES

The following Table shows the main abnormalities found at half-yearly examinations in the Metropolitan Centres:—

TABLE LXVI

Enlarged tonsils	1,658
Knock knees	1,582
Flat feet	380
Bow legs	212
Adenoiditis	193
Carious teeth	140
Unbilical hernia	103
Tonsillitis	67
Skin rash	66
Cardiac murmur	60
Birth mark	30
Intoeing	24
Stained teeth	21
Allergy	18
Pronated feet	11
Squint	10
Hydrocoele	9
Ringworm	8
Chalky teeth	5
Impetigo	5
Pilonidal cyst	5
Undescended tests	5
Thread worms	4
Naevus	4
Epigastric hernia	3
Cyst	3
Congenital deformity	3
Inguinal hernia	2
Bronchitis	2
Mumps	2
Miscellaneous	12

The following Table shows the main abnormalities found at half-yearly examinations at Country Centres:—

TABLE LXVII

Knock knees	52
Umbilical hernia	21
Flat feet	21
Intoeing	13
Bow legs	9
Enlarged tonsils	9
Inverted feet	7
Tonsillitis	4
Squint	4
Thread worms	2
Angioma	2
Adenoiditis	2
Allergy	2
Fat intolerance	2
Hammer toes	2
Miscellaneous	8

TABLE LXVIII

Results of Examinations in Mothercraft for School Children, School Year Ending 1958

Time	Name	Number in Class	Number sat for Examination	Number Obtaining Over 60 Per cent.
February–April	Indooroopilly State High School	124	111	97
	Milton Primary School	89	81	70
	Somerville House	19	18	17
	Camp Hill State High School	39	39	39
	Salisbury State High School	148	142	126
	Cavendish Road State High School	153	145	133
May–August	Mitchelton State High School	88	81	80
	Banyo State High School	168	141	132
	Wynnum Intermediate School	180	168	143
	Domestic Science High School	142	121	111
	State Commercial High School	99	92	69
	State High School	46	44	44
August–December	Redcliffe State High School	40	39	35
	Balmoral State High School	47	44	44
	Ipswich State High School	142	127	113
	Kedron State High School	198	180	172
	Total	1,722	1,575	1,425

TABLE LXIX

RESULTS OF EXAMINATIONS IN MOTHERCRAFT FOR SCHOOL CHILDREN, SCHOOL YEAR ENDING 1958

Time	Name	Number in Class	Number sat for Examination	Number Obtaining Over 60 Per cent.
	Country Centres			
August-September ..	Charters Towers High School	45	39	37
	Winton State School	8	4	3
	Winton Convent School	3	3	3
	Julia Creek State School	2	..	..
	Hughenden State School	13	12	11
	Richmond State School	11	7	6
	Richmond Convent	4	4	3
	Total	86	69	63

TABLE LXX

INFANT DEATH RATES PER 1,000 LIVE BIRTHS FROM SELECTED CAUSES

Cause	International List No. (1)	Queensland (1)	Australia (1)	England and Wales (2)	Canada (3)	New Zealand—Europeans Only (4)	U.S.A. Total (5)	U.S.A. Whites Only (5)	Netherlands (6)
		1957	1957	1957	1956	1955	1954		1956
Total live births	..	33,763	220,358	723,381	450,739	49,869	4,017,362	3,443,630	231,204
Total deaths under 1 year ..	..	732	4,717	16,720	14,399	1,002	106,791	82,200	4,387
Total deaths under 4 weeks ..	..	514	3,384	11,904	9,065	705	76,724	61,254	3,002
Death rate under 1 year	..	21·68	21·41	23·11	31·95	20·09	26·58	23·87	18·98
Death rate under 4 weeks	..	15·22	15·36	16·46	20·11	14·44	19·10	17·79	12·98
Rate from—									
Congenital Malformations ..	750–759	3·91	4·00	4·62	5·12	3·93	3·76	3·92	4·75
Birth Injuries	760–1	3·17	3·28	2·58	3·43	2·89	2·80	2·75	5·11
Post-natal Asphyxia & Atelectasis	762	1·72	2·25	3·88	3·64	2·75	4·33	4·12	
Immaturity	774–6	4·86	4·56	4·30	4·93	3·25	5·82	5·18	2·40
Pneumonia of Newborn ..	763	0·80	0·64	0·99	1·14	0·42	0·78	0·63	0·40
Diarrhoea and Enteritis of Newborn	764	..	0·04	0·05	0·33	0·06	0·17	0·12	0·02
Other Diseases of Early Infancy	765–773	2·22	1·87	1·23	3·27	1·17	1·89	1·71	1·96
Total Diseases of Early Infancy	..	16·18	16·64	17·65	21·86	14·47	19·55	18·43	14·64
Pneumonia (aged 4 weeks and over)	490–493	1·60	1·47	2·02	3·55	1·58 (7)	2·06	1·48	0·40
Diarrhoea and Enteritis (4 weeks and over)	571	0·53	0·41	0·39	1·07	0·20	0·89 (8)	0·63 (8)	0·15
All Other Causes	..	2·87	2·89	3·05	5·47	3·84	4·08	3·33	3·79

(1) Demography Bulletin No. 75, 1957.
(2) Registrar-General's Statistical Review of England and Wales—Part I.—Tables, Medical.
(3) Vital Statistics. Dominion Bureau of Statistics, 1956.
(4) New Zealand Year Book, 1957.
(5) Vital Statistics of the United States, 1954, Vol. II.
(6) Statistical Year Book of the Netherlands, 1955–56.
(7) Includes also Influenza and Bronchitis (aged 4 weeks and over). (Classes 480–483 ; 490–493 and 500–502.)
(8) Includes also Chronic and Ulcerative Colitis (Class 572).

	Queensland	Australia	England and Wales	Canada	New Zealand—Europeans Only	U.S.A. Total	U.S.A. Whites Only	Netherlands
Comparable Infant Mortality Rates—All for Year 1957	21·7	21·4	23·1	30·7	20·0	26·3	23·5	17·2

TABLE LXXI

MAJOR CAUSES OF DEATH IN FIRST YEAR OF LIFE (QUEENSLAND, 1950–1958). PERCENTAGE OF TOTAL DEATHS

Year	Prematurity	Congenital Malformation	Birth Trauma	Post-natal Asphyxia	Bronchopneumonia	Erythroblastosis	Pneumonia of the Newborn	Gastro-enteritis and Colitis	Neo-natal Diseases arising from Toxaemia
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1950	21·5	15·0	16·0	9·0	5·1	3·4	3·0	1·3	2·0
1951	20·0	13·8	17·0	7·7	5·0	4·3	4·3	5·3	3·0
1952	24·2	16·1	14·6	10·5	3·0	3·0	3·1	3·5	1·8
1953	18·9	18·9	16·0	10·5	4·1	3·5	3·7	4·2	3·3
1954	27·0	18·8	15·5	9·6	2·6	1·7	2·4	3·5	3·3
1955	21·5	19·5	16·3	10·0	4·3	3·5	3·3	3·2	2·1
1956	25·7	18·3	12·5	8·4	7·7	3·4	2·2	3·1	2·0
1957	22·4	18·0	14·6	7·9	6·3	3·3	3·7	2·4	1·4
1958	21·6	17·2	16·4	9·3	5·6	3·2	2·6	2·3	1·4

DIVISION OF SCHOOL HEALTH SERVICES

Chief Medical Officer: P. R. Patrick, M.B., B.S. (Qld.)

Chief Dental Officer: T. D. Pugh, L.D.S. (Eng.), L.D.Q.

General Outline of Year's Activities

During the year the work of School Health Services consisted of three major projects. Firstly, this was the first complete year since the interruption by the Children's Salk Vaccine Campaign that sisters were employed solely in their routine school health duties. Secondly, school dentists continued their much appreciated visits to schools in country Queensland, many of them in remote areas, far distant from centres of population. The third activity was the continuation of the Salk Vaccine Campaign. By the end of June, 1958, the Salk Vaccination programme had reached a stage at which all children in the first priority age range of six months to fourteen years had been given the opportunity of receiving the recommended course of three injections. The age range was then lifted to include all persons to forty-four years. School Health Services continued to control the Campaign. In the country, Local Authorities accepted the responsibility of immunising all age groups. In Brisbane, the City Council commenced immunisation of new babies reaching the eligible age range, but School Health Services conducted the Campaign in the older age groups.

Staff

The medical staff has remained the same.

In the nursing section, all except one of the positions in the various districts have been filled.

However, there has been considerable increase in school population in post-war years and the number of children in some of the present districts is too high to allow as frequent examination as desired. It is hoped to increase the nursing staff during the coming year. The dental staff, too, is not sufficient to give as frequent visits to schools as desirable. Unfortunately, during the year three districts have been without dental officers due to lack of staff. State Fellowship Dentists who graduate at the end of 1959 should help to ease the staff shortage.

Staff Training

At the beginning of 1959, a course of training for new sisters was arranged in Brisbane by Dr. O'Hara and Miss Bardsley. The course consisted of lectures and visits to Public Health Departments and handicapped children centres. Special training in Tuberculin testing was arranged by the Director of Tuberculosis. This latter training enables country school sisters to assist the Division of Tuberculosis in detection of the disease. Mr. T. D. Pugh, Chief Dental Officer, has commenced giving all school sisters practical instruction in the detection of dental caries. After such training, school sisters are capable of advising parents regarding further dental attention for their children. On two occasions during the year, arrangements were made for consultants to lecture and demonstrate defects common to children. The Service is grateful to these specialists who spoke about visual and orthopaedic defects respectively. Such instruction is invaluable in solving problems found in School Health work and creates a better understanding between this Service and the practising medical profession.

It is considered that the training and instruction outlined above is making school sisters better equipped both from an overall public health point of view and in their own particular field.

Routine School Health Examinations

This year saw the highest number of children examined in any one year since the inception of the Service. Altogether throughout Queensland 969 schools were visited by school sisters. The majority of these, viz., 885, were country schools. Pleasing as this expansion is, there is still room for improvement and it is hoped that the near future will see at least an annual visit by a school health officer to all schools in the State. The policy of this branch entails priority for country children, both in medical and dental divisions. More than one third of the schools visited by school dentists and sisters are situated away from railheads and are visited by hiring private transport, the cost of which is borne by the Department. As the nursing staff is not quite sufficient to adequately cover the State, the number of sisters employed in Brisbane has been kept to a minimum. Although medical facilities are more readily available in the capital city, the proportion of uncorrected medical defects is equally as high as that encountered in country children. Additional staff, which it is hoped to appoint during the coming year should lighten the burden of metropolitan school sisters whose districts are growing daily in school population. The number of primary school children in both State and denominational schools examined by school sisters totalled 91,965. In Brisbane, Ipswich and North Queensland centres, pupils commencing school were given a more thorough examination by medical officers. In addition, children in upper grades referred by teachers and parents, or specially selected by the nursing staff, were examined by school doctors. The total number of children so examined was 9,246.

When school medical inspections commenced almost fifty years ago in Brisbane, the most common medical defect found at school examinations was an ear, nose or throat condition. These conditions are still found in school children and by far the most frequent cause of absenteeism from school is upper respiratory tract infection. However, probably due to a change of opinion regarding enlarged tonsils, the number of ear, nose and throat conditions in school children considered to need attention is much less today than formerly. At the present time, apart from dental caries, which occur at least to some degree in almost every child in Queensland, the most common defect which this Service finds, is defective vision.

5,166 parents were advised by School Health Services to seek further medical opinion regarding a defect discovered during School Health examinations. This number constituted a percentage of 5·6 of all children examined. Apart from defective vision and ear, nose and throat defects, common medical defects found were postural, orthopaedic and skin conditions.

The mere notification to parents of defects found would be worthless unless further medical attention was sought. A follow-up of defects notified is carried out by each school sister in conjunction with the Head Teachers of the schools attended by the children. A check of medical attention sought by parents is made at the end of four weeks and again at the end of two months. An analysis of records reveals that at least eighty per cent. of parents advised of defects in their children by School Health Service officers sought further medical advice.

Communicable Diseases in Schools

The only communicable disease which caused any degree of absenteeism amongst school children during the twelve months was respiratory tract infection. During the early winter months of 1959 many children suffered along with adults from a wide-spread epidemic of what was true influenza. In addition the customary amount of other types of respiratory infection thinned the ranks of classes at times.

Apart from this type of disease there was no serious outbreak of infectious disease. A perusal of notifiable diseases reported to the Department during the year shows in most instances fewer cases occurring amongst school children. There is one disease, however, which appears to be increasing in Queensland, viz., Infective Hepatitis. During the year 229 cases were notified from school children. Several cases of the disease occurred in both children and adults in the Metropolitan suburbs of Mitchelton and Grovely in the Autumn of 1959. There have been suggestions that Infective Hepatitis might be spread during the administration of injections. As the mass immunisation Salk Campaign amongst adults had been conducted in the area approximately six months before the start of the epidemic, a check was made of all cases reported during the first few months of the outbreak. Only approximately twenty-five per cent. of the cases had received Salk Vaccine. Of these, the cases occurring in children had received their injections all over twelve months previously. Spread of the disease by injections during the Salk Vaccination Campaign would explain very few of the cases. With the co-operation of the Medical staff of Public Hospitals in Brisbane, an endeavour is being made to obtain further information regarding the spread of the disease.

Next to Infective Hepatitis, the notifiable disease which provided the most cases amongst school children was Rheumatic Fever. Throughout the year, a total of 154 cases of Rheumatic Fever were reported from school children. Over twenty per cent. of the cases came from Toowoomba, a city with approximately three per cent. of the State's population. In 1958 the Toowoomba cases were investigated by experts from the Institute of Child Health at Sydney. Some of the children investigated at Toowoomba were not suffering from Rheumatic Fever.

It is pleasing to note that diseases which can be prevented by immunization are becoming less. Only three cases of diphtheria and eight cases of tetanus occurring in school children were notified. It is hoped that the time will come when these diseases will not figure at all in the notifiable disease list.

The Division of Tuberculosis is gradually expanding its programme of Tuberculin testing of school children. In Brisbane, a sister from the Chest Clinic continued the programme of testing primary school leavers instituted in recent years, and extended the scheme to include a similar age group at Ipswich schools. In the country centres where Tuberculosis Medical Officers are stationed, School Health sisters are assisting with the school programme. From Table LXXIV, it will be noted that the percentage of natural positive reactors in the school leaving group (mostly twelve- and thirteen-year olds) is approximately twenty-one in both cities. In Northern Queensland a much higher percentage of positive reactors in school children was influential in the Department's decision to commence its compulsory Chest X-ray scheme in that part of the State.

Special Education

Certain groups of children with a particular disability require special attention in order to receive adequate education or training. In this category are placed the deaf, blind, spastic and mentally retarded children. The actual education of these groups remains the responsibility of the Education Department and allied organisations. School Health Services, however, must share some of the responsibilities in the care of such children. These responsibilities include the detection of such children, advice to Educational Authorities on the extent the particular disability will handicap the progress at school and the creation of an awareness in the minds of the public, medical and lay, of the facilities available for the training of these special groups.

In Queensland, School Health Services shoulders its responsibilities in this regard in many ways. All officers have special instruction in the detection of handicapped children. Visits are paid by new sisters to all special schools during their training period. Special reports are submitted on such children for referral to the authority concerned. Often the country sisters pay special home visits to advise parents of special schooling facilities available. Officers of School Health Services serve on special committees with Education Department officers to determine the educational needs of particular handicapped children after they have had a thorough medical examination. Sixth-year medical students now study handicapped children under the guidance of University, and School Health Medical Officers.

Audiometric Survey

A special survey to estimate the incidence of deafness in children attending normal schools, which was commenced early in 1958, was continued in Brisbane, Ipswich, and Toowoomba schools. Using portable audiometers, school sisters examined children in the first two grades at primary schools, which include many children in the five to seven years age group. From 11.807 children examined, a hearing loss of 35 decibels or worse was found in 177 children. Of these, sixteen children had been previously diagnosed and treated. The remaining children were referred to the Commonwealth Acoustic Laboratory for further investigation.

At the time of writing, all children had not reported, but there were sufficient numbers further examined to determine the incidence of deafness. In approximately eighty per cent. of children considered to be deaf in screening tests, the diagnosis was confirmed at the Commonwealth Acoustic Laboratory. On this basis it is estimated that approximately 144 children from the 11,807 examined (or a percentage of 1·2) have a degree of deafness which could handicap their schooling. Some of the cases are of the conductive type and fortunately respond to treatment. The information regarding this disability is given to class teachers so that the requirements regarding seating in class are carried out.

SCHOOL DENTAL SERVICES

It is pleasing to report another year of service to country schools by the School Dental Officers. The four dental trains have again made it possible for children attending schools along railway lines extending inland from the coast to receive dental attention. The Atherton Tableland area is serviced by Rail Dental Clinic No. 1. During the year it visited such far distant schools as Petford, Lyndhurst, Mount Garnet, and Almaden, as well as many others. Children attending schools along the Great Northern Railway and in Central-Western Queensland had the opportunity of receiving treatment from the Dental Officer in Charge of Rail Dental Clinic No. 4. The territory visited by this clinic extends from Charters Towers to Camooweal and down through Winton to the Longreach districts. The area was completely covered in the twelve months and in the schools, visited the following names are noticed:—Windorah, Stonehenge, Isisford, Camooweal, Dajarra, and Boulia. The territory allotted to Rail Dental Clinic No. 2 includes schools in the Dawson Valley and along the near Central Western Railway. Owing to a greater population than areas visited by the first two clinics mentioned it is usually staffed by two dentists. Owing to staff shortage only one dentist has been allotted to the clinic this year. This has restricted the area visited to the Dawson Valley area, but the clinic is now moving westward and before the end of 1959 it is hoped to give a service to the schools in the Emerald and Branch Line districts. The fourth rail clinic travels from Chinchilla westward. During the twelve months it has not been possible for the clinic to complete the circuit but it has given a much needed service to children living in such places as Injune, Muckadilla, Yuleba, and Dulacca.

Other School Dentists are not so fortunate in the facilities available and give a very satisfactory service. working under difficult conditions. Using portable equipment and working often on school verandahs, they have spent many weeks away from home to give country children the benefit of their service. Where possible, portable electric engines are used but there are still some country schools without electricity and dentists have to use foot engines. When these factors are considered, much praise is due to the School Dental Officer, who visits only those schools outside a fifteen mile radius from a hospital board dental clinic. During the year, school dentists visited 388 schools and 17 homes conducted by religious and State organisations, and treated 9,511 children. During the visit to a school, the dentist takes note of the children under regular dental care, either privately or publicly. Figures for the year reveal that only fifty per cent. of children examined receive regular dental care. Another disquieting feature is the extent of dental caries. In 24,770 children examined by school dentists, only 1,207 or a percentage of 4·9 had naturally sound mouths. In every 100 school children examined, 95 have or have had some degree of dental decay. Some of these have had dental treatment but at the time of the school dentist's visit 75 per cent. of children need dental attention. During the year, the Chinchilla Local Authority has decided to add fluorine to the public water supply to prevent dental caries. The School Dental Service will watch the effects of this procedure with interest.

SALK VACCINATION CAMPAIGN

During 1958-59 the Queensland Salk Vaccination Campaign comprised mainly immunization of new babies reaching the eligible age of six months and the new priority group in the age range, fifteen to forty-four years inclusive. In addition, children who had missed injections during the Children's Campaign were given the opportunity of receiving them.

Previous to this year, School Health Services had been responsible for administering the injections to children. When the older age groups were placed in the priority range, it was decided to invite Local Authorities to conduct the campaign in their particular areas. With the exception of the Brisbane City Council, all local authorities accepted the responsibility. In Brisbane, the City Council carried out immunisation of infants and missed injections in older children, but requested the Department of Health and Home Affairs to administer the vaccine to the older age groups. Thus School Health Services continued to supervise the campaign throughout the State and forwarded supplies to all local authorities, as well as conduct the campaign in the upper age groups in the Metrolopitan area. In Brisbane, the work of the campaign by the Department was not restricted to the new age range. Until the City Council commenced its programme, School Health Services conducted a number of Saturday morning clinics in William Street for children, and at the adults clinic, parents who themselves were receiving the vaccine were allowed to have their babies immunized. This latter provision saved mothers, particularly those living in outer suburbs, much travelling time and inconvenience.

The Adult Campaign in Brisbane

The Adult Campaign in Brisbane was carried out in two ways. In the first method, Brisbane was divided into four zones and a vaccination team of two trained sisters allotted to each zone. The campaign was commenced simultaneously in the four zones and moved from the outer suburbs towards the centre of the city. Application forms for vaccination were placed in pharmacies in the area to be visited and the completed forms collected after people had been advised of the intending campaign. Arrangements were made for clinics at schools at night and to each person was posted an individual appointment card. The actual immunization was carried out by departmental and private doctors working with the vaccination team. In the second method the vaccination was carried out during working hours at government departments, factories, firms and large stores. Such organisations appointed a liaison officer to co-operate with a vaccination team from School Health Services, consisting of two sisters and a doctor. At all centres the scheme worked smoothly and the response under this scheme was much higher than at public clinics in the suburbs.

Central clinics, at the department, were run at frequent intervals during the year to enable people who missed injections at the previously arranged clinics to receive vaccination.

Response in the Various Age Groups

When the campaign commenced in 1956, the response of parents in taking the opportunity of having their children vaccinated was indeed pleasing. In the early months of the campaign well over ninety per cent. of children in the eligible age range commenced immunization. While the response has dropped slightly as the campaign continued it is estimated that 90 per cent. of children between six months and seventeen years inclusive have received at least one injection of Salk Vaccine. Those who have received two injections total 84·5 per cent., while the percentage in this age range who have completed the recommended course of three injections approximates 77 per cent. Many of the children who have received one or two injections will complete the course when the required time between doses has elapsed. When the campaign commenced in 1956, the eligible age range was 6 months to fourteen years inclusive. As it is three years since the campaign started, the older children in the first priority group are now seventeen years of age. As a result of this, the upper age range commenced at eighteen years and thus covers the groups from this lower limit to forty-four years. When the campaign for this older age group was being planned it was known that response in this age range in pilot schemes in Southern States was not high. The help of the Queensland Health Education Council was enlisted and this organisation prepared pamphlets, posters, radio "scatters" and slides. This assistance was welcomed by Local Authorities in the country as well as by the campaign in Brisbane. In the capital city, the Department decided to take the campaign as near to the people as possible. Clinics were held in all suburbs as well as places of employment. Special central clinics were held for people who missed injections at either place. It is estimated that in the older age range, the overall State response was 51 per cent. of the eligible population throughout Queensland. Compared with the response in children this is low, but it is considerably higher than some other States and other parts of the world. An investigation amongst University students who did not avail themselves of the opportunity for vaccination was carried out by medical students under the direction of Professor D. Gordon, of the Department of Preventive and Social Medicine of the University of Queensland. By far the commonest reason for students not attending vaccination clinics was indifference.

Table LXII. gives details of injections given during the year. It will be noted that during 1958-59, over 650,000 injections were given in Queensland. This total is much higher than the previous year. Since the commencement of the campaign, over 1,800,000 injections of Salk Vaccine have been administered, and in all age groups some 700,000 persons have commenced immunization.

TABLE LXXII

VARIOUS STATISTICS REGARDING THE CAMPAIGN

INJECTIONS GIVEN DURING 1958–59

——	First Injections	Second Injections	Third Injections	Total
Children (0–17 years)	36,687	32,023	30,782	99,492
Adults (18–44 years)	243,480	225,398	83,598	552,476
Expectant Mothers	367	391	43	801
Total All Ages	280,534	257,812	114,423	652,769

INJECTIONS GIVEN FROM BEGINNING OF CAMPAIGN TO 30TH JUNE, 1959

——	First Injections	Second Injections	Third Injections	Total
Children (0–17 years)	440,482	413,035	376,258	1,229,775
Adults (18–44 years)	266,055	247,997	83,641	597,693
Total All Ages	706,537	661,032	459,899	1,827,468

Population of Queensland (30–6–58)	
Children (6 months to 17 years)	488,504
Adults (18 to 44 years)	520,036
	%
Percentage of eligible children who have received one injection	90
Percentage of eligible children who have received two injections	84·5
Percentage of eligible children who have received three injections	77
Percentage of adults (18 to 44 years) who have had at least one injection	51

Incidence of Poliomyelitis

The incidence of poliomyelitis remains low. All cases of the disease and all suspected cases are closely followed by special reports and the examination of serum and faecal samples. These samples are examined at the Commonwealth Serum Laboratories in Melbourne and the final decision regarding diagnosis is made by a special poliomyelitis Surveillance Committee set up by the Commonwealth Government. During the twelve months, ten cases of poliomyelitis-like disease were reported to the Department. Only three cases were confirmed by the Committee as being poliomyelitis. Five cases were found to be non poliomyelitis while a diagnosis in two cases has not been reached. One of the cases regarded as poliomyelitis had received three injections of Salk vaccine. A paralysis of one leg resulted. This patient was the only case of paralytic poliomyelitis in a vaccinated person in this State.

Cost of the Campaign

When the Department decided to accept the responsibility for the older age groups, it also decided to charge a fee of two shillings to persons fifteen and over, for each injection. This fee was collected at the time the person reported for the injection. In addition to the cost of conducting the campaign in Brisbane, the costs for the year included the despatch of vaccine to the Country and the provision of advertising the campaign through Queensland. During the year, some of the expenses incurred in the previous Children's Campaign were paid also. The total expenditure for all aspects of the campaign for the year 1958-59 amounted to £25,340. The collections from older age groups in Brisbane brought an income of £19,038. No charge was made for injections given to children, University and secondary school students or apprentices. When consideration is given to the expenses connected with the country aspect of the Campaign, the rise in Medical Officers' fees and the overtime paid to clerks at night clinics, it is felt that the Campaign has been conducted economically.

The Campaign in the Country

During the year, people in all parts of Queensland were given an opportunity to commence immunization. Local Authorities were grouped together on a geographical basis and an allocation of vaccine was made to one local authority in each group each week. When one local authority completed its initial immunization of two injections, the allocation was transferred to a neighbouring authority. When all local authorities had carried out the first phase of the campaign, third injections were commenced at the starting point in each group. In addition to the older age groups, country councils commenced vaccinating new babies reaching the eligible age of six months. While the response varied from one area to another, the overall campaign has been very satisfactory. The co-operation of local authority health inspectors with the Department has been much appreciated. The Royal Flying Doctor Service carried out injections in many remote areas of the State.

Co-operation of Many Agencies

Again it is pleasing to report the friendly and valuable assistance given by many departments and agencies without whom the campaign would not have been able to run smoothly. It is fitting to place on record the manner in which the following agencies assisted:—

Commonwealth Department of Health whose officers receive and transfer supplies of vaccine to this Department.

The Red Cross Blood Transfusion Service, which for three years has given the use of its cold room for packing of country supplies.

The St. John's Ambulance members who have assisted voluntarily at all adult public clinics in Brisbane.

The Department of Public Works whose Electrical Branch officers provided excellent lighting in the schools for night clinics.

The Education Department and the Head Teachers who co-operated in the arrangement of suburban clinics.

The Royal Flying Doctor Service, without whose medical officers, the people in outback Queensland might still be waiting for their vaccine.

The many liaison officers appointed by firms, departments, &c., and with whom it was a pleasure to work.

The Queensland Health Education Council whose assistance has resulted in the high response in all age groups.

Throughout the year the campaign staff—medical, nursing, and clerical—have given much appreciated, loyal, and conscientious service.

TABLE LXXIII

DETAILS OF ROUTINE SCHOOL HEALTH EXAMINATIONS

Schools visited	969
Children examined	91,965
Number of children with defects requiring attention	5,166
Apparent physical defects notified—	
Deafness	397
Defective Vision	2,109
Other Eye Defects	440
Tonsils	1,190
Scrotal and groin swellings	129
Postural defects	165
Lower limb defects	357
Heart	33

COMMUNICABLE DISEASES IN SCHOOL CHILDREN, 1958-59

Diphtheria	3
Scarlet Fever	99
Poliomyelitis	..
Lead Poisoning	1
Malaria	5
Meningitis	5
Typhoid Fever	2
Tetanus	8
Tuberculosis	16
Rheumatic Fever	154
Infective Hepatitis	229

TABLE LXXIV

MANTOUX TESTING PRIMARY SCHOOL LEAVERS

Brisbane—	
Number Tested	8,625
Natural Positives	1,857
Percentage of Natural Positives	21·5%
Positive after B.C.G.	332
Negative	6,254
Given B.C.G.	6,162
Refused B.C.G.	92
Absent for Reading	182
Ipswich—	
Number Tested	707
Natural Positives	152
Percentage of Natural Positives	21·5%
Positive after B.C.G.	6
Negative	544
Given B.C.G.	541
Refused B.C.G.	3
Absent for Reading	5

TABLE LXXV

Details of School Dental Inspections—Schools, Homes and Correspondence Pupils

Number of Children Examined	Number Notified for Professional Attention	Number of Children under Regular Dental Care			Number with Sound Mouths		Carious Teeth Saveable (Permanent)	Carious Teeth Unsaveable (Permanent)	Temporary Carious Teeth	Permanent Teeth Lost or Extracted	Six-year Molars Extracted
		Clinic	School Dental Officer	Private Dentist	Natural	Operatively Restored					
24,770	6,183	408	4,523	7,895	1,207	4,947	31,019	4,983	29,321	1,949	8,936

Permanent Teeth Filled	Temporary Teeth Filled	State of Mouth			Use of Tooth Brush			Percentage of Children with Dirty Mouths	Total Number of Defective Permanent Teeth	Average Number of Defective Permanent Teeth per Child
		A.	B.	C.	A.	B.	C.			
37,529	9,823	6,691	13,953	2,300	7,443	10,691	5,666	9·1%	35,892	1·4

TABLE LXXVI

Total Treatment for Year

Number of Children Examined	Number of Children Treated	Number of Extractions	Number of Fillings	Number of Other Treatments	Number of Operations
24,770	9,511	9,575	22,725	14,668	34,014

Number of Schools visited	388
Number of Institutions visited	17
Number examined at Institutions	1,537
Number treated at Institutions	867
Number of Students examined at—	
Teachers' College	1,142
Gatton College	662

TABLE LXXVII

Treatment of School Children at Brisbane Dental Hospitals

Number of New Cases	Number of Extractions	Number of Fillings	Number of Other Treatments
28,999	30,560	99,533	60,980

DIVISION OF MENTAL HYGIENE

Director of Mental Hygiene: Dr. B. F R. STAFFORD, M.B., B.S. (Melb.)

Administration Officer: Mr. S. T. G. BEEDHAM.

In reviewing the past year's activities it can be stated that definite progress has been made in the Mental Hygiene Service in many directions. There have been improvements in medical staffing, amenities, facilities and equipment, establishment of special units, extension of existing policies and the introduction of new policies and practices that will prove to be of inestimable value in the years to come.

The following comments will perhaps serve to highlight certain of the advances and improvements that have been made and are proposed to be made.

The Medical staffing of the Hospitals has improved to such a degree that it is now possible for the clinical units of the Hospitals to introduce intensive treatment, reclassification of patients, &c. The improvements in the medical staffing has also made possible the granting of special leave to Medical Officers to pursue Post-graduate Studies for the award of the Diploma of Psychological Medicine.

The problem of accommodation associated with absorption into community life, particularly relating to patients in the Mental Hospitals who could be discharged and who, in many cases, have no relatives or friends to care for them, has been a matter of concern for some considerable time.

In order to assist these people in their gradual assimilation into community life and changed social existence, it was approved that a Rehabilitation Unit be created for the accommodation of these ex-patients.

Working plans have been completed and preliminary work is now being carried out on the construction of a Rehabilitation Unit situated in the grounds of "Eventide", Sandgate.

An entirely new feature in the appointment of Chaplains to the Mental Hygiene Service was approved. Three Chaplains, following Departmental arrangements, assumed full-time duty at the Brisbane Mental Hospital, Goodna. It is anticipated that this scheme will be extended to the other Mental Hospitals in due course.

The Chaplains at the Brisbane Mental Hospital, Goodna, work in harmony and close co-operation with the staff. They have been well received and are already exerting a perceptible beneficial influence generally.

For some considerable time the need for the establishment of a Psychiatric Hospital for the treatment of short stay psychiatric cases has been apparent.

In January, 1959, it was decided to proceed with the construction of the first stages of this Hospital on an eminently suitable site adjacent to the Chest Hospital at Chermside. The first stage of this Hospital provides for Public Male and Female Wards, Intermediate Male and Female Wards, Boys' and Girls' Blocks, Clinical Blocks, Dining Rooms, Serveries, Occupational Therapy buildings, and a Nurses' Home.

It is envisaged that this Hospital will meet a long felt need in the treatment of short stay psychiatric cases and will also function as a day hospital in respect of ex-patients who have been discharged as in-patients, but still require minimum treatment on a day hospital basis.

Following the return of the Director-General of Health and Medical Services in the middle of 1958 the Honour Scheme that was in being at the Toowoomba Mental Hospital in a modified way was expanded. Wards at the Brisbane Mental Hospital have been converted to Open Wards, notably the Wacol Repatriation Pavilion and Ward B. Farm Colony, and further extensions have been pursued at the Toowoomba Mental Hospital.

It is of interest to note that Ward B. Farm Colony, Brisbane Mental Hospital, Goodna, is an experiment in self-government by the patients, guided by the Medical Officer and Nursing staff. The patients in this Ward live a self-contained and self-regulated existence.

So as to afford the Medical Superintendents the opportunity of becoming familiar with, and observing present trends and practices in Mental Hospitals in other States, it was approved that they pay official visits to New South Wales and Victoria. Visits have been completed by the Medical Superintendents of the Brisbane and Toowoomba Mental Hospitals and it is expected that the Medical Superintendent of the Mental Hospital, Ipswich, will visit these States later this year.

The adoption of a policy of integration into Departmental services was approved. In pursuance of this policy, arrangements have been made for H.M. Prison to supply certain foodstuffs to the Brisbane and Ipswich Mental Hospitals. It is confidently expected that when this scheme is fully implemented, H.M. Prison will supply the total milk and bread requirements for these Hospitals and the possibility of extending these services into other fields is at present under examination.

It has been felt for some considerable time, more particularly so since the report of the Parliamentary Committee on Delinquency, that there was an acute need for the setting up of Guidance and Welfare Clinics as one of the aims of preventive psychiatric medicine.

To this goal, a re-organisation has been proposed, combining the aims and activities of the Psychiatric Clinic with the Welfare and Guidance

Clinics. Premises have been selected for the housing of these particular Units which will provide the utmost co-operation between the Units.

Appointments of professional staff for the Welfare and Guidance Clinics have been approved and it is anticipated that the full staff will be appointed before the Clinics are ready to operate.

The last occasion on which the Director was sent overseas by the State Government to study the latest trends, modern methods in psychiatric medicine, Mental Hospital Administration, &c., was in 1937.

Cabinet recently considered that the time was opportune for another visit by the Director to obtain the latest information on modern procedures, co-ordination of psychiatric services involving Mental Hospitals, General Hospitals, General Health Services, &c. The Director departed from Brisbane in April and his anticipated return is November, 1959.

BRISBANE MENTAL HOSPITAL

Medical Superintendent: C. R. Boyce, M.B., Ch.M., (Syd.)

As the current year of activities comes to its close, it is pleasing to be able to report that the atmosphere of the Hospital, both among the patients and the nursing staff, is one of pleasure and content. The Hospital has passed into a phase whereby the inculcation of proper and adequate patient-nurse relationship is having noticeable effect. New ideas are absorbed and become effective slowly in old and long established institutions, and old ways are hard to change.

In the past few years a number of young and enthusiastic members have passed through their training period and it has been possible to imbue them with the qualities requisite for modern psychiatric treatments.

The result is seen in increased interest and activity in the nursing staff towards the betterment of the patients' whole hospital life, with appreciation that their patients are human beings like themselves, with likes, dislikes, wishes, hopes, even aspirations, needs for exercise, amusement, and recreation, acquisition of knowledge, and a feeling of taking part in current events. The strict disciplinary custodial regime is gone for good, and the principle of ever increasing freedoms and imposition of responsibilities for patients, is rapidly gaining ground.

Female Convalescent Ward is in its seventh year as a shining example of complete patient autonomy and from its inception has required no nursing staff whatever. Though very small, the patients are comfortably ensconced and quite separate from the hurly-burly of the rest of the female division. They may come and go as they please; they order and collect their own stores; decide all their own domestic (cooking, housekeeping, laundry, &c.) problems, and no untoward incident has yet occurred.

Farm Ward (Male 17) with some 50 patients has for fifty (50) years and more, been a completely open Ward, and has never required more than one nurse at any time to administer it. From time to time a patient wanders away. Otherwise, incidents have been remarkably few and with no serious results. This ward now presents a pleasing picture with gardens, both flower and vegetable, lawns, louvred verandahs, floor coverings, and modern pictures on the walls and a change room for patients coming in from work.

Male Ward B. of Farm Colony has just celebrated its first anniversary with a self-organised concert. The patients in this Ward live a self-contained, self-regulated life, and with a minimal advisory nursing staff, work out their salvation assisted by their Medical Officer and a Psychologist. Their various activities are recorded in "Colony Times," a periodical by the patients and for the patients with a popular circulation throughout the Hospital, and which, accepting contributions from other Wards, acts as a stimulus and an incentive to other patients to aspire to residence at Farm Colony B.

There have been abscondences from this Ward, and the patients involved have been without exception young, apparently rehabilitated psychopaths, unable to appreciate the freedom granted to them.

There are brighter sides, however, to Hospital activities and we are fortunate to have Miss E. Sinclair, appointed early this year, as Matron. She brings with her fresh ideas on nursing Administration. Essentially a Matron, in appearance and in action, she administers and solves here staffing problems fearlessly, impartially and with scrupulous justice. She is not as may appear from the foregoing an automatom, but at heart, kind, gentle, experienced, and fully aware of the patients' and the nurses' problems, deals with them all with soft voiced courtesy, yet with firmness, giving and commanding respect.

The Invalid Cookery Centre is in full action under the aegis of Mrs. J. Bacon, a highly trained and experienced officer. Already 10 nurses have been successful in gaining their Certificates.

The gift of nearly £100 worth of recreational apparatus for the playground by Mrs. Kelly's Concert Party is much appreciated.

The money was the balance of the Concert Party Funds when Mrs. Kelly so suddenly and so sadly died earlier in the year.

Three Full-time Chaplains have been Appointed to the Institution

They worked in harmony and close co-operation for an all too short period when everyone was shocked to learn of the sudden demise of Father Pender, who had endeared himself with everyone during his brief but brilliant career. Messrs. Bradley (Church of England) and Vickery (United Council of Churches) are carrying on splendidly and to them is largely due the improved happier tone and morale of patients and staff mentioned earlier in this report.

A very important feature of the year's activities has been furtherance of the Departmental plan of placing Senile Psychotics in special senile annexes attached to Country General Hospitals, where all general hospital treatments and amenities may be available to elderly citizens freed of the unfair stigma of "insanity" and where pensions may be restored or fresh ones obtained. A successful major operation was the despatch of 70 old men some 600 miles to Westwood, near Rockhampton, by rail, and with full medical and nursing escort. It may be recorded that the trip was completely uneventful and not one sleeping draught was required, the patients arriving cheerful and well fed at their destination.

All the usual hospital procedures were carried out smoothly in treatment, feeding, clothing, bathing, and general rehabilitation of patients by recreational, occupation, industrial, and other psychotherapies.

It is fitting to complete this report by wishing good luck, happiness, and good health to Mesdames Richardson and Knehr. Miss Richardson was for nearly 30 years Senior Matron and Miss Knehr for nearly as long as an Assistant Matron.

Both had spent practically a lifetime in the service and both experienced the old regime and the new. Both went through the vicissitudes of wartime shortages, carried the Hospital through serious staff shortages and in post war years, administered very well and conscientiously, with a preponderance of untrained New Australia Staff without ever attaining full establishment personnel. They carry the best wishes and thanks of the staff.

STATISTICS

	Males	Females	Total
1. Average daily population . .	1,293	1,062	2,355
2. Admissions—New cases . .	385	430	815
Re-admissions	124	152	276
Total . .	509	582	1,091
3. Senile admissions	121	130	251
4. Admissions of mentally deficient	37	28	65
5. Discharges	414	356	770
6. Deaths	118	129	247
7. Average age at death . .	71	72	71·5
8. Leave granted	1,846	1,502	3,348

WACOL REPATRIATION PAVILION

This small part of the Hospital performs well, providing comfortable residence, easy quiet routine of life, recreation and rehabilitation for its 100 or so ex-servicemen.

Primarily designed for "Repat. Cases," i.e. those whose mental illness may be attributable to conditions of warfare overseas; it has never accommodated all such patients at the Brisbane Mental Hospital.

In the moderately near future all repatriation patients will be housed at Wacol Pavilion, and other types of ex-service patients will be returned to the wards of the Mental Hospital proper.

The principal feature of the year's activities has again been the Anzac Day Memorial Service. Well organised by the Goodna Sub-branch of the R.S.L. this year's function eclipsed all previous ones, over 200 patients, relatives and friends attending to assemble before the Flag on the lawn and shrubberies of the beautiful grounds of the Pavilion. The function was ably conducted by Mr. Garnet Burns, President of Goodna Sub-branch and Honorary Secretary, Mr. Frank McGreevy. Rev. Bradley and Rev. Vickery conducted Memorial Services and appropriate music was supplied by the Ipswich Model Brass Band who marched in solemn dignity through the Hospital Grounds to the Pavilion.

The ceremony of lowering the Flag was in the hands of Ipswich Boy Scouts and the Last Post performed in sad memory by Mr. J. Wardrop.

The adoption of the Honour System, i.e., Open Wards, has been unattended by untoward incident and patients stroll past the open gates quite unconcernedly.

The patients are well cared for, the meals are good and varied, clothing is appropriate and of good quality and living conditions are comfortable. Recreations and amusements are well catered for and it is possible that the patients realise in their own ways that life is good at the Pavilion and have no desire to leave it.

Statistically this small unit is quite busy, for with a population always one or two less than, or more than, the 100 mark, there were during the year 25 admissions and 13 discharges.

TOOWOOMBA MENTAL HOSPITAL

Medical Superintendent: J. H. B. **HENDERSON**,
M.B. B.S., (Syd.)

Last year a start was made on alterations and additions to various Male and Female Wards and although progress has been somewhat retarded at times, bathrooms, dressing rooms and lavatories are now in use in three of the Male Wards and are functioning very efficiently. Progress is fairly satisfactory in most of the other Wards.

Commencement of work on the new Tuberculosis Unit is anticipated early in the new financial year.

Male Ward E has now been completely converted to a fourth open Ward with no untoward incidents so far. It is hoped to open another Ward at a later date when the Public Works Department vacates it.

During the year the Local Authority completed the installation of a new six-inch water reticulation service to replace a system rendered inefficient through time and resultant internal encrustation. Thus, a good supply of water is now available to new Sculleries and Bathrooms although a complete change-over to all services has not yet been effected.

The above are the major works carried out, whilst at the same time our Artisan Staff have been busy maintaining and improving conditions for both patients and staff. More linoleum has been laid in the Wards, articles of furniture constructed, paths, patios and gardens laid down whilst painting in brighter colours has been accelerated by the acquisition of a paint spraying machine.

A bread cutting and buttering machine has been ordered, but not yet delivered. Two slow combustion stoves have been obtained, one of which is already installed in Female Ward 6, whilst the other is in the process of being installed in the Hospital Ward. A new and a reconditioned washing machine have been placed in the laundry; also a new and very efficient hydro-extractor. However, it must be admitted that the laundry is rather obsolete and barely able to cope with any washing emergency.

A group of psychology students and lecturers from the Queensland University spent a day here during the year and received instruction and lectures in psychiatrical training. Also recently, for a period of two weeks, two female Filipino Social Workers who have been brought to Australia under the Colombo Plan received instruction in Mental Hospital routine. They were also taken by Officers of this Institution to other centres such as Court House, Farm Home for Boys, Westbrook, General Hospital, Thoracic Annexe, "Hamewith" Home for Mentally Retarded Children, the Epileptic Home, &c. Miss Watson, our Occupational Therapist, also devoted much time with them in her branch of work, whilst Mr. Proctor, Psychologist, gave them instruction in psychology.

It is gratifying to know that this Hospital has been officially appointed a Training School for Occupational Therapy students at the Queensland University and the first student will commence early in the new financial year. Miss Watson now conducts frequent musicales in the evenings for certain patients and just recently very successfully reorganised our Annual Sports. Inter-Ward competitions in ball games, tug-o-war, &c., are now providing much recreation for certain of the more active patients as well as our customary entertainments.

A very original and highly successful entertainment was given at Xmas time when Miss Watson organised "Carols by Candlelight." This was conducted on the lawn in the evening under electric lights with male and female patients and staff, communal hymn singing, &c. Friends and relatives of the staff also attended.

Many transfers of senile patients to the various General Hospital Annexes have been carried out and it is our fervent hope that with lessened over-crowding at the Brisbane Mental Hospital for a similar reason, there will be no further transferees to this Hospital, thus enabling us to reduce our Ward patient establishment to a number consistent with that required by hygiene regulations and consistent with satisfactory nursing. The high proportion of voluntary admissions continues and over two-thirds of our patients present themselves in this manner, thus permitting of early treatment with a resultant higher proportion of cures.

Recreation and entertainment for the patients have been full and comprehensive, although our facilities for Occupational Therapy could be improved.

There have been several changes in medical staff during the year.

Dr. J. Alexander, ex Brisbane Mental Hospital, is now Acting as Deputy Medical Superintendent. Dr. G. McCutcheon from Montrose, Scotland, replaced Dr. Locke who was transferred to Ipswich Mental Hospital, whilst Dr. J. Stuart has been appointed the fourth Medical Officer.

Matron C. Harvey, after 46 years' service with the Department, has retired and Matron M. Clifford has succeeded her. The Hospital was very fortunate to have the services of such a conscientious, devoted, and popular person as Matron Harvey for so long a period.

Some tranquillising drugs have been discarded as useless, a few have been retained as being very helpful in our therapy, whilst one or two others at present undergoing trial most probably will be added to the latter list.

IPSWICH MENTAL HOSPITAL

Medical Superintendent: R. A. Atherton,
L.R.C.P. (Edin.), L.R.C.S. (Edin.)
L.R.F.P.S. (Glasgow)

The building programme at this Hospital has continued through this last year. The new Female Ward 5, to house one hundred and sixty (160) patients is nearing completion. It is a fine building, set on a slight rise, with views across Ipswich and towards the Range. There are three storeys, and with its wide passages, spacious lounge, and the liberal use of windows, it has avoided any tendency to a feeling of being "shut in". Design will enable good supervision of patients without this being obtrusive. This ward is well designed for the convalescent patient who is regaining confidence and interest in her environment. In cases where this is delayed there will be maintained the appreciation of being in pleasant surroundings.

To cope with the increased requirements when this new ward is opened, additions are being made to the kitchen and nurses' quarters. These latter are particularly impressive, with wide windows and special sound proofiing.

The Department of Public Works has completed the building of a Visitors' Pavilion for Male Ward 2 and installed a ventilation system in the same ward. A pavilion for patients in Female Ward 1 has been completed and a similar pavilion for patients in Male Ward 2 is nearing completion.

The Main Roads Department is constructing a new road to Female Ward 5 and other roads are being improved by resurfacing and realignment to eliminate sharp turns and dead-ends. This will speed deliveries to and from the wards. When the number of deliveries to and from wards with meals, laundry, stores, waste, &c., is considered, the significance of these improvements is realised. Problems of drainage have had to be overcome.

Plans for extensive alterations to Male Ward 3 are prepared. Modernisation of Male Ward 3 is anticipated to relieve much of the present congestion in this Ward, where a large percentage of the patients are confined to their cots.

A new garage to house the fleet of hospital trucks has been completed. A disused air-raid shelter has been converted by the Department of Public Works into a shelter for cars belonging to the resident nursing staff.

A residence for the Medical Officer is nearing completion.

Staff recruiting has been maintained, but there is still a shortage of female staff, particularly trainees. Educational films are being shown to nurses to maintain interest in their profession and keep them acquainted with recent advances.

There has been the reintroduction of a Social Club for nurses—the "Ipswich Mental Hospital Social and Recreation Club". For such a young body it has made a very promising start to bring the staff together to create a feeling of harmony. It has plans for extensions to provide something to interest all staff members.

The Queensland Country Women's Association has commenced Handicraft Classes. Some patients produce very fine work, but it is particularly gratifying to see, rather than the result, the effort put into and the interest aroused in patients who previously had shown a minimum of activity.

The Country Women's Association, Red Cross Society, St. Vincent de Paul Society, Catholic Daughters of Australia, Baptist Band, and the A.D.V.A.C.S. Concert Party have provided additional entertainments for the patients. The patients enjoy these extra entertainments and the pleasure of being able to mingle with other patients. It is hoped that more public spirited bodies will take an active interest in the patients for both the benefit of the patients and a better appreciation by the public of the work done in Mental Hospitals.

The "Courier-Mail" Toy Fund donated gifts to the children and Miss Hinton and Party provided entertainment for the children at Christmas. On Christmas Eve a party of patients, supported by staff members providing the musical accompaniment, sang Carols outside each ward.

The R.S.S.A.I.L.A. Sandy Gallop Sub-branch has been active in the interests of ex-servicemen, arranging picnics and entertainments outside the Hospital grounds. The number of trips for patients arranged by the Hospital has been increased to twelve for the year.

Eighty-three patients attended the Ipswich and West Moreton Show, which they thoroughly enjoyed. Six members of the Girl Guides (a patient group) attended a Girl Guide Extension Section Group Camp at Tallebudgera.

During the year the "Queensland Times" published several articles dealing with Hospital activities. These articles were well presented and the favourable publicity is appreciated.

MOSMAN HALL—CHARTERS TOWERS

Visiting Medical Officer: J. E. Robinson, M.B., B.S. (Q'ld.)

Prior to the beginning of this year only two wards were in operation at this Hospital; now two additional wards have been opened, which means a gradual reclassification of patients can now be undertaken.

The naming of the wards has been varied. Whereas in other Mental Hospitals in the State, wards are listed numerically or alphabetically, it was approved that historical names be adopted at this hospital and such names as Fraser House and Clark House have been used; Fraser and Clark being associated with Mosman in the finding of gold in Charters Towers.

The patient population has increased by 50 per cent. over the last twelve months.

Tranquillising drugs still continue to be used to good effect.

Our high standard of catering still continues.

Many and varied types of recreation and entertainment are provided for the patients. We are grateful to the numerous convenors of concert parties and sporting bodies who have provided entertainment. Regular visits are made by the Red Cross and R.S.S.A.I.L.A. to distribute additional comforts.

Representatives of different religious denominations take care of the patients' spiritual needs and regular church services are held. Patients on parole attend their respective Church services in Charters Towers.

The extensive lawn area on the eastern side of the Kitchen Block has been planted with shade trees which ultimately will provide additional shade for visitors as well as beautifying the area. Formation and developmental work on the lawns of the recently occupied wards is being undertaken.

Lighting has been provided within the Hospital area and is of great benefit, particularly when patients are being taken to entertainments in other wards.

In accordance with modern trends, all efforts are being made to allow patients the maximum freedom consistent with their mental conditions.

The administrative nursing staff has been increased from one to four and supervision for 24 hours daily is now possible.

The enthusiasm of the trainee male nurses is reflected in their high attendance rate at classes. Lectures and demonstrations are given by Dr. J. E. Robinson and Matron Burns, of Eventide Home. Clinical meetings are held periodically between the Visiting Medical Officer and Nursing Staff.

The production of citrus fruits has been such that it has been possible to distribute portion thereof to the General Hospital after the requirements of this Hospital have been met.

PSYCHIATRIC CLINIC

Psychiatrist: J. A. Hede, M.B., B.S. (Melb.), D.P.M. (Melb.)

The increase in new patients treated at the Clinic has continued during the past twelve months and approximates twelve per cent. over last year's figures. The increase has been evident both in the Child Guidance Section and in adult patients.

An increasingly important function of the Clinic has been the review of patients on leave and discharged from the various Mental Hospitals in this State, and many of these patients have been assisted in rehabilitation by means of supportive treatment and medication while under regular review.

Another important aspect of the Clinic's functions has been student teaching, and one week was devoted to lectures and demonstrations in all Clinic activities. Visitors included University students, School Health Service Sisters, and students from the Sub-Normal Children's Welfare Association.

Medical Officers from the Brisbane Mental Hospital have continued to attend on a weekly sessional basis and have given valuable service in the therapeutic programme. Additional sessions in Child Guidance and psychotherapy are provided by part-time Medical Officers.

EPILEPTIC HOME

Superintendent: E. G. Kenyon

Patients

As a result of close contact, observation and care, a high degree of confidence has been established between patients and administration, which is reflected in the comparative happiness and well being of those concerned.

At times there are difficulties and anxieties as may be expected in an Institution such as this. Generally any difficulties are resolved to the satisfaction of all concerned.

Every method applied is intended to improve or maintain the mental state, to prevent tension and to keep the patient happy and occupied.

Within limits imposed by necessity, as free a life as possible is provided.

Enlarging of the Home with a view to segregation and classification of patients is at present under consideration.

The Visiting Medical Officer, Dr. J. H. B. Henderson, Medical Superintendent, Toowoomba Mental Hospital, attends bi-weekly and in emergency.

School

The school continues to play a necessary part in the physical, mental and emotional development of the children at the Home.

On roll are 16 boys and 25 girls, including 12 children from the Mental Hospital.

During the past twelve months two little girls (ex-pupils) have been taken home with hopes of their being able to adjust themselves to a normal life with and in their family environment. This is very encouraging—but only those whose continuous patience and perseverance to implant faith in the child's own powers with hopes of their being able to fit in and adjust themselves to the family's mode of living—can appreciate the magnitude of this step. Because of the varying degrees in both the physical and mental development of the children in the school, there is a corresponding attitude in their application to and in the result of their efforts.

Endeavouring to keep the child happy in the knowledge that he is in a friendly place and among friends, who care for and give him sympathetic understanding, encourages a feeling of satisfaction, and his little achievements turn to self-confidence. With this idea firmly established in himself, all efforts and results (however insignificant to the onlooker) become a joy and pride to the child, and so he learns to like himself and his efforts.

If he can be strengthened by this feeling of warmth and confidence, he will have a better chance of happy relationship among those with whom he must spend a great part of his life.

School work continues in its many phases and activities.

Farm

Seasonal conditions during the early part of the year were very adverse, but farm production was well maintained. Crops grown comprised potato, cabbage, lettuce, cauliflower, beetroot, pumpkin, turnips, onions, carrots, silver beet and broad beans. Maize, too, was grown for poultry feed.

Egg production kept the Home supplied during the year.

Fire Equipment

Maintenance of fire-fighting equipment was carried out by Toowoomba Fire Brigade. Hoses and chemical extinguishers were tested regularly.

Entertainment

Outings during the year by bus for adults, and picnics by R.A.C.Q. and V.A.D. detachment for the children were much appreciated and enjoyed.

As usual, dances and pictures weekly gave much pleasure, and brightened the lives of these people. Concerts were given by the Salvation Army Band at intervals during the year. Religious Services were held by various denominations each Sunday.

TABLE LXXVIII
QUEENSLAND MENTAL HOSPITALS
Showing Admissions, Re-admissions, Discharges and Deaths, during the Year ended 30th June, 1959

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
On the Books of the Hospitals on 1st July, 1958	1,418	1,217	2,635	601	587	1,188	366	216	582	97	2,482	2,020	4,502
Admitted for the first time — certified	331	370	701	39	53	92	8	3	11	63	441	426	867
Admitted for the first time — voluntary	54	60	114	48	38	86	32	17	49	14	148	115	263
Re-admitted — certified	84	113	197	18	28	46	3	..	3	16	121	141	262
Re-admitted — voluntary	40	39	79	8	16	24	11	11	22	5	64	66	130
Totals All Hospitals	1,927	1,799	3,726	714	722	1,436	420	247	667	195	3,256	2,768	6,024
Transferred from Brisbane	..	..	..	55	80	135	1	1	2	48	104	81	185
Transferred from Toowoomba	3	3	6	..	..	..	..	..	..	..	3	3	6
Transferred from Ipswich	19	..	19	..	..	..	..	..	..	..	19	..	19
Transferred from Mosman Hall	4	..	4	..	..	..	..	..	..	..	4	..	4
***Total number under care during the year**	1,953	1,802	3,755	769	802	1,571	421	248	669	243	3,386	2,852	6,238
†Discharged—													
Recovered	151	224	375	28	59	87	3	3	6	61	243	286	529
Relieved	107	86	193	9	13	22	3	..	3	1	120	99	219
Not Improved	100	12	112	55	55	110	1	4	5	..	156	71	227
Voluntarily left	56	34	90	32	11	43	2	..	2	3	93	45	138
Died	118	129	247	47	39	86	36	8	44	10	211	176	387
Total Number Discharged and Died	532	485	1,017	171	177	348	45	15	60	75	823	677	1,500
Transferred to Brisbane	..	..	..	3	3	6	19	..	19	4	26	3	29
Transferred to Toowoomba	55	80	135	..	..	..	..	..	..	..	55	80	135
Transferred to Ipswich	1	1	2	..	..	..	..	..	..	..	1	1	2
Transferred to Mosman Hall	49	..	49	..	..	..	..	..	..	..	49	..	49
Total number discharged, died, &c., during year	637	566	1,203	174	180	354	64	15	79	79	954	761	1,715
Remaining on Books of Hospitals on 30th June, 1959	1,316	1,236	2,552	595	622	1,217	357	233	590	164	2,432	2,091	4,523
Average Number Daily Resident	1,293	1,062	2,355	590	566	1,156	355	219	574	119	2,357	1,847	4,204
Number on leave of absence on 30th June, 1959	92	206	298	14	46	60	3	1	4	10	119	253	372
Proportion of Mentally Sick to each 1,000 of population as at 30th June, 1959	..	..	..	..	..	..	..	..	..	..	3·29	2·95	3·13
Proportion of Admissions per 10,000 of population for year ended 30th June, 1959	..	..	..	..	..	..	..	..	..	..	10·51	11·31	10·56

* These totals include interhospital transfers.

† Includes Section 49 Discharges as shown—

—	Brisbane Males	Brisbane Females	Brisbane Totals	Toowoomba Males	Toowoomba Females	Toowoomba Totals	Ipswich Males	Ipswich Females	Ipswich Totals	Mosman Hall Males	Totals Males	Totals Females	Totals Totals
Recovered	1	4	5	..	4	4	..	..	..	2	3	8	11
Relieved	11	25	36	3	5	8	..	..	..	..	14	30	44
Not Improved	2	3	5	1	..	1	1	3	4	..	4	6	10
	14	32	46	4	9	13	1	3	4	2	21	44	65

TABLE LXXIX

Admissions, Discharges, and Deaths, with the Proportions of Recoveries and Deaths per cent. during the Year ended 30th June, 1959

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
Total Admissions ..	509	582	1,091	113	135	248	54	31	85	98	774	748	1,522
*Discharged—													
Recovered ..	164	244	408	52	66	118	3	3	6	64	283	313	596
Relieved ..	147	97	244	16	14	30	3	..	3	1	167	111	278
Not Improved ..	103	15	118	56	58	114	3	4	7	..	162	77	239
Died	118	129	247	47	39	86	36	8	44	10	211	176	387
Average Number Daily Residents ..	1,293	1,062	2,355	590	566	1,156	355	219	574	119	2,357	1,847	4,204
Percentage of Recoveries on Admissions ..	32·22	41·92	37·40	46·01	48·88	47·58	5·55	9·67	7·06	65·31	36·56	41·84	39·16
Percentage of Patients Relieved on Admissions	28·88	16·66	22·36	14·16	10·37	12·09	5·55	..	3·53	1·02	21·57	14·84	18·26
Percentage of Deaths on Average Number Resident	9·13	12·15	10·49	7·96	6·89	7·43	10·14	3·65	7·66	8·4	8·95	9·52	9·21

* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under these headings.

TABLE LXXX

Forms of Mental Disorders in Patients Admitted during the Twelve Months ended 30th June, 1959

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
1. AFFECTIVE REACTION TYPES—													
(*a*) Manic Depressive Psychosis	18	28	46	..	..	..	..	..	..	1	19	28	47
(*b*) Mania	..	5	5	5	2	7	2	..	2	2	9	7	16
(*c*) Depression	5	27	32	11	22	33	..	..	..	4	20	49	69
Reactive Depression ..	6	8	14	2	1	3	..	..	..	..	8	9	17
Recurrent Depression ..	2	7	9	..	..	..	..	..	..	..	2	7	9
Hypomania	..	6	6	1	4	5	..	..	..	..	1	10	11
(*d*) Involution Depression ..	1	24	25	..	12	12	..	..	..	..	1	36	37
Cyclothymic Personality	..	..	..	..	..	..	..	..	..	..	..	..	..
Involution Melancholia ..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. SCHIZOPHRENIC REACTION TYPES—													
(*a*) Schizoid Personality ..	..	..	..	..	..	..	1	..	1	..	1	..	1
Schizphrenia	170	130	300	25	24	49	3	..	3	28	226	154	380
Hebephrenia	..	1	1	..	..	..	..	..	..	..	..	1	1
(*b*) Paraphrenia	8	47	55	2	2	4	..	..	..	2	12	49	61
Catatonia	4	2	6	..	..	..	..	..	..	2	6	2	8
(*c*) Paranoid Reaction ..	25	18	43	..	..	..	..	..	..	2	27	18	45
3. ORGANIC REACTION TYPES—													
(*a*) Organic Dementia ..	4	4	8	..	..	..	..	..	..	1	5	4	9
Organic Psychosis.. ..	8	2	10	..	..	..	..	..	..	1	9	2	11
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..
Huntington's Chorea ..	..	..	..	..	..	..	..	..	..	1	1	..	1
Kernicterus	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebral Atrophy	..	..	..	..	..	..	..	..	..	..	..	..	..
(*b*) Toxins—													
Acute Toxic Psychosis ..	..	1	1	..	..	..	..	..	..	..	..	1	1
Acute Alcholism ..	1	..	1	..	..	..	..	..	..	..	1	..	1
Alcoholic Hallucinosis ..	3	..	3	4	2	6	..	..	..	7	14	2	16
Alcoholic Psychosis ..	4	..	4	..	..	..	..	..	..	6	10	..	10
Alcoholic Psychosis (Korsakov's)	3	..	3	1	..	1	..	..	..	2	6	..	6
Cerebral Syphillis ..	2	..	2	..	..	..	..	..	..	..	2	..	2
Alcoholism	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute Confusional Psychosis	2	12	14	..	..	..	..	..	..	..	2	12	14
(*c*) Arteriosclerotic Dementia	13	12	25	2	2	4	..	..	..	7	22	14	36
Arteriosclerotic Psychosis	7	1	8	2	2	4	..	..	..	2	11	3	14
Presenile Dementia ..	6	3	9	1	..	1	..	..	..	..	7	3	10
Presenile Psychosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Senile Dementia	54	81	135	9	20	29	..	..	..	..	63	101	164
Senile Psychosis	37	34	71	6	2	8	..	..	..	2	45	36	81
Schilder's Disease ..	..	..	..	..	..	..	1	..	1	..	1	..	1
Senile Depressive	..	..	..	..	..	..	..	..	..	..	..	..	..
4. EPILEPTIC REACTION TYPES—													
Epileptic Psychosis ..	5	5	10	4	3	7	..	..	..	..	9	8	17
Epilepsy	12	4	16	..	..	..	..	..	..	4	16	4	20
5. PSYCHONEUROTIC REACTION TYPES—													
Psychoneurosis	12	32	44	..	..	..	..	..	..	..	12	32	44
Anxiety State	3	9	12	8	13	21	..	..	..	..	11	22	33
Hysteria	3	20	23	..	3	3	..	..	..	..	3	20	23
Obsessive	1	1	2	..	..	..	..	..	..	..	1	1	2
Neurasthenia	..	7	7	..	..	..	..	..	..	..	..	7	7
Depression	1	..	1	1	4	5	..	..	..	1	3	4	7
6. MENTAL DEFICIENCY—													
(*a*) Mental Deficiency ..	33	15	48	..	..	..	..	..	..	3	36	15	51
With Epilepsy	1	7	8	2	5	7	7	5	12	1	11	17	28
Moron	1	..	1	9	6	15	5	1	6	..	15	7	22
Mongol	1	1	2	..	..	..	7	9	16	..	8	10	18
With Schizophrenia ..	..	4	4	..	..	..	..	..	..	..	..	4	4
(*b*) Idiocy	..	1	1	..	2	2	13	5	18	..	13	8	21
(*c*) Postencephalitic Idiocy..	..	..	..	..	..	..	1	..	1	..	1	..	1
(*d*) Microcephalic Idiocy ..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Imbecility	1	..	1	7	3	10	10	9	19	..	18	12	30
Postmeningitic	..	..	..	..	..	..	1	2	3	..	1	2	3
Epiloia	..	..	..	..	..	..	1	..	1	..	1	..	1
7. ADDICTION—													
Chronic Alcoholism ..	29	6	35	11	..	11	2	..	2	17	59	6	65
Drug	1	..	1	..	..	..	..	..	..	..	..	1	1
8. PSYCHOPATHIC PERSONALITY	19	17	36	..	1	1	..	..	..	2	21	18	39
9. TRAUMATIC PSYCHOSIS ..	3	..	3	..	..	..	..	..	..	..	3	..	3
10. Undiagnosed—	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	509	582	1,091	113	135	248	54	31	85	98	774	748	1,522

TABLE LXXXI

Causes of Deaths which occurred during period ended 30th June, 1959

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
General Diseases—													
Abdominal Malignency	..	1	1	..	..	..	..	..	..	..	..	1	1
Septicaemia	..	..	..	..	..	..	..	..	..	..	..	..	..
Congenital Syphilis	..	..	..	..	..	..	1	..	1	..	1	..	1
Toxaemia	1	..	1	..	..	..	..	..	..	..	1	..	1
Carcinoma of Pharynx	2	..	2	..	..	..	..	..	..	..	2	..	2
Cirrhosis of Liver	1	..	1	..	..	..	..	..	..	..	1	..	1
Diabetites Mellitus	..	..	..	..	..	..	1	..	1	..	1	..	1
Dementia Paralytica	..	..	..	1	..	1	..	..	..	..	1	..	1
Asphyxiation	1	..	1	..	..	..	..	..	..	..	1	..	1
Schizophrenic Dementia	..	..	..	..	1	1	..	..	..	..	..	1	1
Chronic Interstital Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..
Ulcer Decubitis	..	3	3	..	..	..	..	..	..	..	..	3	3
Tertiary Lues	..	..	..	1	..	1	..	..	..	..	1	..	1
Schizophrenic Deterioration	..	..	..	..	..	..	..	..	..	..	..	..	..
Gangrene of Foot	1	2	3	..	..	..	..	..	..	..	1	2	3
											10	7	17
Diseases of the Nervous System—													
Cerebral Degeneration	2	3	5	1	2	3	5	2	7	..	8	7	15
Cerebral Thrombosis	3	5	8	5	..	5	..	..	..	1	9	5	14
Cerebral Haemorrhage	2	3	5	..	..	..	..	..	..	..	2	3	5
Cerebral Arteriosclerosis	3	3	6	..	1	1	..	..	..	..	3	4	7
Epilepsy	..	..	..	..	1	1	..	..	..	..	..	1	1
Hydrocephalus	..	..	..	..	..	..	1	..	1	..	1	..	1
Status Epilepticus	..	..	..	..	..	..	..	..	..	..	..	..	..
Huntington's Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..
Subarachnoid Haemorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebral Metasus	..	..	..	..	..	..	..	..	..	..	..	..	..
Intercranial Haemorrhage	1	..	1	..	..	..	..	..	..	..	1	..	1
Cerebral Trauma	..	..	..	..	..	..	..	..	..	..	..	..	..
Pituitary Tumour	1	..	1	..	..	..	..	..	..	..	1	..	1
											25	20	45
Diseases of the Circulatory System—													
Cardio Vascular Degeneration	48	34	82	13	17	30	5	..	5	..	66	51	117
Coronary Occlusion	9	10	19	..	..	..	6	1	7	1	16	11	27
Acute Myocarditis	..	1	1	..	..	..	..	..	..	..	..	1	1
Myocardial Degeneration	4	4	8	..	..	..	..	..	..	..	4	4	8
Coronary Thrombosis	3	..	3	6	5	11	..	..	..	..	9	5	14
Toxicmyocarditis	..	..	..	..	..	..	2	..	2	..	2	..	2
Myocardial Infraction	..	6	6	..	..	..	..	..	..	..	..	6	6
Auricular Fibrillation	..	2	2	..	..	..	..	..	..	..	..	2	2
Chronic Myocarditis	..	..	..	4	1	5	..	..	..	..	4	1	5
Congestive Cardiac Failure	6	6	12	6	1	7	1	..	1	..	13	7	20
Left Ventricular Failure	7	3	10	..	..	..	2	..	2	..	9	3	12
Cardiac Failure	2	1	3	..	..	..	..	..	..	1	3	1	4
Congenital Cardiac Failure	..	..	..	..	..	..	..	1	1	..	..	1	1
Myocardial Insufficiency	..	1	1	..	..	..	..	..	..	..	..	1	1
Rheumatic Heart Disease	..	1	1	..	..	..	..	..	..	..	..	1	1
											126	95	221
Diseases of the Respiratory System—													
Broncho Pneumonia	13	27	40	1	3	4	5	4	9	2	21	34	55
Lobar Pneumonia	..	1	1	..	..	..	2	..	2	1	3	1	4
Pulmonary Thrombosis	..	..	..	..	..	..	..	..	..	..	..	..	..
Terminal Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia	2	1	3	..	..	..	..	..	..	1	3	1	4
Cardiac Asthma	..	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	4	3	7	1	1	2	1	..	1	..	6	4	10
Carcinoma of Lung	..	..	..	..	..	..	..	..	..	..	..	..	..
Lung Abscess	..	..	..	..	..	..	..	..	..	..	..	..	..
Empysema	..	..	..	..	..	..	..	..	..	..	..	..	..
Hypostitic Pneumonia	..	..	..	1	..	1	..	..	..	2	3	..	3
Status Asthmaticus	..	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Embolism	..	1	1	..	..	..	..	..	..	..	..	1	1
											36	41	77
Diseases of the Alimentary System—													
Carcinoma of Pancreas	..	..	..	..	1	1	..	..	..	..	..	1	1
Gastroenteritis	..	4	4	2	1	3	..	..	..	..	2	5	7
Carcinoma of Rectum	..	1	1	..	..	..	..	..	..	..	..	1	1
Gastric Carcinoma	..	..	..	1	2	3	..	..	..	..	1	2	3
Megacolon	..	..	..	1	..	1	..	..	..	..	1	..	1
Obstruction of Oesophagus	..	..	..	..	..	..	1	..	1	..	1	..	1
Hepatitis	..	..	..	1	1	2	..	..	..	..	1	1	2
Carcinoma of Colon	..	..	..	..	..	..	1	..	1	..	1	..	1
Carcinoma of Stomach	..	..	..	..	..	..	1	..	1	..	1	..	1
Neurosis of Liver	..	..	..	..	..	..	..	..	..	1	1	..	1
Tuberculous Peritonitis	..	..	..	1	..	1	..	..	..	..	1	..	1
Peptic Ulcer	..	1	1	..	..	..	..	..	..	..	..	1	1
Obstruction of Bowel	..	..	..	..	..	..	1	..	1	..	1	..	1
											11	11	22
Diseases of the Genito-Urinary System—													
Prostitis and Cystitis	..	..	..	1	..	1	..	..	..	..	1	..	1
Chronic Nephritis	..	1	1	..	..	..	..	..	..	..	..	1	1
Adenocarcinoma Uteri	..	..	..	..	1	1	..	..	..	..	..	1	1
Granulosa-cell Tumor of Ovary	..	..	..	..	..	..	..	..	..	..	..	..	..
Carcinoma of Urinary Bladder	..	..	..	..	..	..	..	..	..	..	..	..	..
Carcinoma of Prostate	1	..	1	..	..	..	..	..	..	..	1	..	1
Acute Pylo Nephritis	..	..	..	..	..	..	..	..	..	..	..	..	..
Polycystic Disease of Kidneys	1	..	1	..	..	..	..	..	..	..	1	..	1
											3	2	5
Totals	118	129	247	47	39	86	36	8	44	10	211	176	387

TABLE LXXXII

Bodily Health and Condition of Patients Admitted during the Year ended 30th June, 1959

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
In apparently good health and condition	272	335	607	76	49	125	47	28	75	60	455	412	867
In indifferent health and reduced condition	182	210	392	21	60	81	1	1	2	32	236	271	507
In bad health and exhausted condition..	55	37	92	16	26	42	6	2	8	6	83	65	148
Totals ..	509	582	1,091	113	135	248	54	31	85	98	774	748	1,522

TABLE LXXXIII

Birth Places of Patients Admitted during Period ended 30th June, 1959

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
Queensland	320	400	720	83	101	184	41	28	69	44	488	529	1017
New South Wales ..	40	51	91	12	9	21	8	..	8	11	71	60	131
Victoria	17	19	36	1	4	5	1	..	1	3	22	23	45
South Australia ..	2	2	4	1	..	1	..	..	..	1	4	2	6
Western Australia ..	2	..	2	..	..	..	..	..	..	2	4	..	4
Tasmania	4	3	7	..	1	1	..	..	..	1	5	4	9
Northern Territory ..	1	..	1	..	..	..	..	..	..	1	2	..	2
New Zealand.. ..	2	4	6	4	..	4	..	1	1	2	8	5	13
England	44	40	84	3	7	10	..	..	..	5	52	47	99
Scotland	12	7	19	3	1	4	..	..	..	2	17	8	25
Ireland	4	10	14	1	..	1	..	..	..	3	8	10	18
Wales	..	1	1	..	..	..	..	..	..	..	..	1	1
India	1	..	1	..	..	..	..	..	..	..	1	..	1
Latvia	2	2	4	..	..	..	..	..	..	..	2	2	4
Rumania	..	1	1	..	..	..	..	..	..	..	..	1	1
Germany	4	4	8	1	3	4	..	..	..	1	6	7	13
Sweden	1	..	1	..	..	..	..	..	..	..	1	..	1
Italy	8	3	11	..	1	1	..	..	..	4	12	4	16
Holland	2	3	5	..	..	..	2	..	2	1	5	3	8
Poland	9	5	14	..	..	..	..	..	..	..	9	5	14
Burma	..	1	1	..	..	..	..	..	..	..	..	1	1
Russia	3	7	10	..	..	..	..	..	..	..	3	7	10
Hungary	2	2	4	..	..	..	..	..	..	..	2	2	4
Czechoslovakia ..	2	2	4	..	..	..	..	..	..	..	2	2	4
United States of America	1	..	1	..	..	..	..	..	..	1	2	..	2
Cyprus	..	..	..	..	..	..	..	..	..	2	2	..	2
Greece	1	..	1	..	..	..	..	..	..	..	1	..	1
Ukraine	..	..	..	..	..	..	..	..	..	..	..	..	..
France	1	..	1	..	..	..	..	..	..	1	2	..	2
Albania	1	..	1	..	..	..	..	..	..	..	1	..	1
Austria	..	2	2	..	1	1	..	..	..	1	1	3	4
Indonesia	..	1	1	..	..	..	..	..	..	..	..	1	1
Yugoslavia ..	3	2	5	..	..	..	..	..	..	3	6	2	8
Malta	..	1	1	..	..	..	..	..	..	..	..	1	1
Bulgaria	..	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	1	1	1	..	1	..	..	..	..	1	1	2
Philippines	..	..	..	..	..	..	..	..	..	..	..	..	..
Canada	2	1	3	..	..	..	..	..	..	..	2	1	3
Sicily	..	..	..	..	..	..	..	..	..	1	1	..	1
Finland	1	..	1	..	..	..	..	..	..	1	2	..	2
West Indies	1	..	1	..	..	..	..	..	..	..	1	..	1
Lithuania	1	..	1	..	..	..	..	..	..	..	1	..	1
China	..	2	2	..	1	1	..	..	..	..	..	3	3
South Africa ..	..	..	..	..	..	..	..	..	..	2	2	..	2
Lebanon	..	..	..	..	..	..	..	..	..	1	1	..	1
Unknown	15	5	20	3	6	9	2	2	4	4	24	13	37
Totals ..	509	582	1,091	113	135	248	54	31	85	98	774	748	1,522

TABLE LXXXIV

Districts whence Patients were Received during the Year ended 30th June, 1959

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Males	Fe-males	Totals
Northern and North-Western	15	29	44	1	2	3	10	1	11	98	124	32	156
Central	23	19	42	2	..	2	5	3	8	..	30	22	52
Southern and South-Western	471	534	1,005	110	133	243	39	27	66	..	620	694	1,314
Totals ..	509	582	1,091	113	135	248	54	31	85	98	774	748	1,522

TABLE LXXXV

General Classification of Occupations of Patients Admitted during the Year ended 30th June, 1959

Occupations	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Males	Fe-males	Totals
Rural Industries ..	50	1	51	19	1	20	1	..	1	20	90	2	92
Secondary Industries, Trades, &c.—													
Building Construction ..	25	..	25	6	..	6	..	..	..	14	45	..	45
Machinery and Electrical ..	43	..	43	7	1	8	..	..	..	1	51	1	52
Foodstuffs, Meat, &c.	25	8	33	3	1	4	..	..	..	6	34	9	43
Clothing, Retail, &c.	2	26	28	..	..	..	..	..	..	1	3	26	29
Mining	1	..	1	1	..	1	..	..	..	2	4	..	4
Transport	19	..	19	5	..	5	1	..	1	4	29	..	29
Clerical	21	18	39	3	6	9	..	..	..	2	26	24	50
Domestic Employment	..	379	379	..	89	89	..	..	..	..	..	468	468
Private Employment	..	4	4	3	..	3	..	..	..	1	4	4	8
Miscellaneous Employment ..	125	2	127	26	1	27	3	..	3	36	190	3	193
No Occupation, and Pensioners ..	164	114	278	20	25	45	3	1	4	10	197	140	337
Professions	22	27	49	3	..	3	..	..	..	..	25	27	52
Children	12	3	15	17	11	28	46	30	76	1	76	44	120
Totals ..	509	582	1,091	113	135	248	54	31	85	98	774	748	1,522

TABLE LXXXVI

Age Groups of Patients whose Admissions, Discharges, or Deaths Occurred during the Year, and those who Remained in the Hospital on 30th June, 1959

Age Group	Admissions			* Discharges						Deaths			Remaining		
				Recovered			Relieved and not Improved								
	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
BRISBANE MENTAL HOSPITAL															
Under 5 years	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1
5 years and under 10 years	4	..	4	..	..	..	3	..	3	..	..	..	22	..	22
10 years and under 15 years	7	7	14	..	..	..	3	2	5	..	..	..	29	4	33
15 years and under 20 years	32	25	57	12	5	17	14	8	22	..	..	..	54	33	87
20 years and under 30 years	86	56	142	35	28	63	31	19	50	3	1	4	149	83	232
30 years and under 40 years	98	116	214	43	57	100	47	23	70	2	2	4	255	215	470
40 years and under 50 years	77	106	183	29	60	89	27	26	53	2	6	8	292	265	557
50 years and under 60 years	65	95	160	23	52	75	24	18	42	10	15	25	261	252	513
60 years and under 70 years	47	66	113	13	30	43	39	8	47	27	20	47	153	191	344
70 years and under 80 years	52	68	120	8	11	19	44	1	45	39	37	76	77	128	205
80 years and under 90 years	38	39	77	1	1	2	18	7	25	33	39	72	22	58	80
90 years and over	1	2	3	..	..	..	..	..	..	2	9	11	1	6	7
Unknown	1	2	3	..	..	..	..	..	..	..	..	..	..	1	1
Totals, Brisbane Mental Hospital	**509**	**582**	**1,091**	**164**	**244**	**408**	**250**	**112**	**362**	**118**	**129**	**247**	**1,316**	**1,236**	**2,552**
TOOWOOMBA MENTAL HOSPITAL															
Under 5 years	1	3	4	..	..	..	..	..	..	..	2	2	1	2	3
5 years and under 10 years	1	3	4	..	..	..	..	..	..	1	..	1	7	5	12
10 years and under 15 years	5	4	9	..	2	2	1	..	1	..	..	..	9	11	20
15 years and under 20 years	14	4	18	1	2	3	2	..	2	..	..	..	28	11	39
20 years and under 30 years	5	20	25	5	13	18	1	4	5	..	1	1	30	44	74
30 years and under 40 years	34	23	57	26	14	40	6	6	12	4	3	7	80	68	148
40 years and under 50 years	18	22	40	12	13	25	5	3	8	4	2	6	112	119	231
50 years and under 60 years	8	17	25	7	13	20	3	7	10	5	5	10	145	174	319
60 years and under 70 years	8	18	26	1	8	9	16	18	34	6	7	13	112	129	241
70 years and under 80 years	10	12	22	..	1	1	22	21	43	15	6	21	51	50	101
80 years and under 90 years	6	7	13	..	..	..	15	10	25	10	10	20	14	6	20
90 years and over	2	2	4	..	..	..	1	2	3	2	1	3	1	..	1
Unknown	1	..	1	..	..	..	..	1	1	..	2	2	5	3	8
Totals, Toowoomba Mental Hospital ..	**113**	**135**	**248**	**52**	**66**	**118**	**72**	**72**	**144**	**47**	**39**	**86**	**595**	**622**	**1,217**
IPSWICH MENTAL HOSPITAL															
Under 5 years	20	22	42	..	..	..	2	2	4	4	2	6	23	24	47
5 years and under 10 years	22	5	27	..	..	..	..	1	1	5	2	7	39	42	81
10 years and under 15 years	3	2	5	..	..	..	1	..	1	4	1	5	30	35	65
15 years and under 20 years	2	2	4	..	..	..	..	..	..	1	2	3	30	21	51
20 years and under 30 years	1	..	1	..	..	..	2	..	2	..	..	..	20	30	50
30 years and under 40 years	2	..	2	..	..	..	..	..	..	..	..	..	24	10	34
40 years and under 50 years	2	..	2	2	1	3	..	1	1	..	..	..	39	16	55
50 years and under 60 years	2	..	2	1	2	3	1	..	1	1	..	1	52	24	76
60 years and under 70 years	..	..	..	..	..	..	..	..	..	11	..	11	68	17	85
70 years and under 80 years	..	..	..	..	..	..	..	..	..	7	1	8	27	9	36
80 years and under 90 years	..	..	..	..	..	..	..	..	..	3	..	3	4	4	8
90 years and over	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals, Ipswich Mental Hospital	**54**	**31**	**85**	**3**	**3**	**6**	**6**	**4**	**10**	**36**	**8**	**44**	**357**	**233**	**590**
MOSMAN HALL															
Under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 years and under 10 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 years and under 15 years	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2
15 years and under 20 years	2	..	2	1	..	1	..	..	..	..	..	..	6	..	6
20 years and under 30 years	22	..	22	13	..	13	1	..	1	1	..	1	22	..	22
30 years and under 40 years	22	..	22	18	..	18	..	..	..	..	..	..	37	..	37
40 years and under 50 years	25	..	25	16	..	16	..	..	..	2	..	2	34	..	34
50 years and under 60 years	9	..	9	8	..	8	..	..	..	2	..	2	24	..	24
60 years and under 70 years	7	..	7	5	..	5	..	..	..	1	..	1	22	..	22
70 years and under 80 years	9	..	9	3	..	3	..	..	..	3	..	3	14	..	14
80 years and under 90 years	..	..	..	..	..	..	..	..	..	1	..	1	2	..	2
90 years and over	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unknown	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1
Totals, Mosman Hall, Charters Towers ..	**98**	..	**98**	**64**	..	**64**	**1**	..	**1**	**10**	..	**10**	**164**	..	**164**
Grand Totals, All Hospitals	**774**	**748**	**1,522**	**283**	**313**	**596**	**329**	**188**	**517**	**211**	**176**	**387**	**2,432**	**2,091**	**4,523**

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*For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under these headings.

TABLE LXXXVII

Marital Status of Patients whose Admissions, Discharges and Deaths occurred during the year and of Patients who Remained in Hospital on 30th June, 1959

Marital Status	Admissions			*Discharges						Deaths			Remaining		
				Recovered			Relieved and not Improved								
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
						Brisbane Mental Hospital									
Single	268	166	434	93	71	164	140	36	176	36	41	77	998	561	1,559
Married	193	299	492	61	134	195	90	53	143	53	25	78	264	501	765
Widowed	41	102	143	6	32	38	15	21	36	29	60	89	35	151	186
Divorced	6	13	19	4	6	10	3	2	5	..	1	1	8	19	27
Unknown	1	2	3	..	1	1	2	..	2	..	2	2	11	4	15
Totals, Brisbane Mental Hospital	**509**	**582**	**1,091**	**164**	**244**	**408**	**250**	**112**	**362**	**118**	**129**	**247**	**1,316**	**1,236**	**2,552**
						Toowoomba Mental Hospital									
Single	57	40	97	23	18	41	35	25	60	36	16	52	503	344	847
Married	45	68	113	28	44	72	24	28	52	6	9	15	63	210	273
Widowed	9	26	35	1	4	5	11	14	25	4	13	17	13	46	59
Divorced	1	1	2	..	..	..	1	4	5	..	..	..	4	16	20
Unknown	1	..	1	..	..	..	1	1	2	1	1	2	12	6	18
Totals, Toowoomba Mental Hospital	**113**	**135**	**248**	**52**	**66**	**118**	**72**	**72**	**144**	**47**	**39**	**86**	**595**	**622**	**1,217**
						Ipswich Mental Hospital									
Single	50	31	81	1	2	3	6	3	9	29	8	37	306	194	500
Married	1	..	1	1	..	1	..	..	..	5	..	5	32	26	58
Widowed	1	..	1	1	..	1	..	..	..	1	..	1	5	5	10
Divorced	..	..	..	..	1	1	..	1	1	..	..	..	4	7	11
Unknown	2	..	2	..	..	..	..	..	..	1	..	1	10	1	11
Totals, Ipswich Mental Hospital	**54**	**31**	**85**	**3**	**3**	**6**	**6**	**4**	**10**	**36**	**8**	**44**	**357**	**233**	**590**
						Mosman Hall									
Single	68	..	68	45	..	45	1	..	1	6	..	6	131	..	131
Married	20	..	20	12	..	12	..	..	..	4	..	4	20	..	20
Widowed	3	..	3	3	..	3	..	..	..	..	..	..	9	..	9
Divorced	6	..	6	4	..	4	..	..	..	..	..	..	2	..	2
Unknown	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2
Totals, Mosman Hall, Charters Towers	**98**	..	**98**	**64**	..	**64**	**1**	..	**1**	**10**	..	**10**	**164**	..	**164**
Grand Totals, all Hospitals ..	**774**	**748**	**1,522**	**283**	**313**	**596**	**329**	**188**	**517**	**211**	**176**	**387**	**2,432**	**2,091**	**4,523**

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* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under these headings.

TABLE LXXXVIII

Expenditure Table for the Financial Year ended 30th June, 1959

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers			Total and Average Costs		
Average Number Daily Resident	2,355			1,156			574			119			4,204		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Total Expenditure	1,123,307	5	11	464,579	7	10	386,761	18	1	92,360	3	1	2,067,008	14	11
Sales	6,918	19	10	1,466	14	6	2,297	12	6	2	12	6	10,685	19	4
Collections	59,655	19	8	3,033	11	6	2,212	10	11	833	13	9	65,735	15	10
Net Expenditure	1,056,732	6	5	460,079	1	10	382,251	14	8	91,523	16	10	1,990,586	19	9
													Average Costs		
Gross Cost per Patient per annum	476	19	9	401	17	8	673	16	0	776	2	9	491	13	6
Net Cost per Patient per annum	448	14	4	397	19	9	665	18	10	769	2	1	473	10	0
Gross Cost per Patient per week	9	5	0	7	14	7	12	19	2	14	18	6	9	9	1
Net Cost per Patient per week	8	12	7	7	13	1	12	16	2	14	15	10	9	2	1

TABLE LXXXIX

Statement showing Expenditure by the Department of Public Works at Mental Hospitals and the Epileptic Home during the Financial Year ended 30th June, 1959

Place	Expenditure 1958–59								
	Revenue Fund			Loan Fund			Total		
	£	s.	d.	£	s.	d.	£	s.	d.
Mental Hospitals—									
Brisbane (Excluding Expenditure at the Repatriation Hospital)	9,113	17	5	27,244	10	6	36,358	7	11
Charters Towers	187	7	1	74,926	14	9	75,114	1	10
Ipswich	2,771	3	11	142,852	2	9	145,623	6	8
Toowoomba	1,077	13	1	90,759	19	6	91,837	12	7
Epileptic Home—									
Toowoomba	43	5	2	577	18	2	621	3	4
	£13,193	6	8	£336,361	5	8	£349,554	12	4

Details of Expenditure on Major Works—Mental Hospitals

		Expenditure 1958–59		
		£	s.	d.
Brisbane	Erection of New General Store	19,043	14	0
	New Amenities—Kitchen Block	3,996	10	11
Charters Towers	Erection of Convalescent Ward	80,564	16	11
	Male Admission Ward	22,943	2	7
	Construction of Internal Roadways	4,022	4	2
	Fencing to Chronic Wards	2,401	0	0
	Installation of Sewerage	1,748	14	3
Ipswich	Erection of New Ward for Females	80,564	16	11
	Additions to Nurses' Quarters	24,872	10	2
	Erection of Shelter Shed—Female Ward 1 ..	10,207	1	5
	Road Works	7,456	9	5
	Additions and Alterations—Main Kitchen ..	4,949	10	4
	New Recreation Hall	4,414	11	7
	Medical Officers Residence	3,075	0	0
	Improvements to Water Supply	2,164	19	1
Toowoomba	Improvements to Sculleries, Bathrooms and Lavatory Accommodation	85,278	6	3
	Supply and Installation of Water Reticulation Improvements	5,080	0	0

TABLE XC

Length of Residence in the Hospital of the Patients who were Discharged or who Died during the Year and of those who Remained on the Books of the Hospital on 30th June, 1959

	*Discharges						Deaths			Remaining		
	Recovered			Relieved and not Improved								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
BRISBANE MENTAL HOSPITAL												
Under 1 month	16	15	31	29	13	42	23	4	27	45	38	83
1 month and under 3 months	62	92	154	49	36	85	19	22	41	70	114	184
3 months and under 6 months	50	66	116	46	21	67	20	21	41	72	95	167
6 months and under 9 months	13	18	31	21	9	30	5	15	20	58	66	124
9 months and under 12 months	8	10	18	12	6	18	6	6	12	35	50	85
1 year and under 2 years	6	17	23	32	16	48	13	19	32	133	138	271
2 years and under 3 years	5	4	9	13	2	15	4	3	7	84	85	169
3 years and under 5 years	2	6	8	9	4	13	5	11	16	125	90	215
5 years and under 7 years	..	6	6	7	2	9	2	9	11	133	89	222
7 years and under 10 years	..	4	4	6	2	8	..	4	4	125	95	220
10 years and under 12 years	..	1	1	4	1	5	2	2	4	67	70	137
12 years and under 15 years	1	2	3	1	..	1	2	3	5	80	64	144
15 years and under 20 years	..	2	2	2	..	2	3	3	6	110	94	204
20 years and over	1	1	2	19	..	19	14	7	21	179	148	327
Totals, Brisbane Mental Hospital	**164**	**244**	**408**	**250**	**112**	**362**	**118**	**129**	**247**	**1,316**	**1,236**	**2,552**
TOOWOOMBA MENTAL HOSPITAL												
Under 1 month	20	4	24	17	9	26	2	4	6	9	6	15
1 month and under 3 months	17	14	31	5	9	14	3	4	7	12	22	34
3 months and under 6 months	9	25	34	5	5	10	2	2	4	7	18	25
6 months and under 9 months	2	1	3	4	2	6	1	1	1	10	18	28
9 months and under 12 months	1	6	7	2	4	6	..	1	2	9	7	16
1 year and under 2 years	2	10	12	5	8	13	2	..	2	16	35	51
2 years and under 3 years	1	3	4	..	3	3	1	1	2	24	23	47
3 years and under 5 years	..	2	2	6	2	8	5	4	9	35	30	65
5 years and under 7 years	..	..	..	..	1	1	2	2	4	36	30	66
7 years and under 10 years	..	1	1	4	2	6	2	2	4	48	45	93
10 years and under 12 years	..	..	..	1	3	4	2	2	4	28	30	58
12 years and under 15 years	..	..	..	2	5	7	3	1	4	46	49	95
15 years and under 20 years	..	..	..	3	2	5	2	2	4	77	74	151
20 years and over	..	..	..	18	17	35	20	13	33	238	235	473
Totals, Toowoomba Mental Hospital	**52**	**66**	**118**	**72**	**72**	**144**	**47**	**39**	**86**	**595**	**622**	**1,217**
IPSWICH MENTAL HOSPITAL												
Under 1 month	..	..	..	1	1	2	1	..	1	5	5	10
1 month and under 3 months	..	..	..	1	1	2	1	..	1	13	2	15
3 months and under 6 months	1	..	1	1	..	1	..	3	3	7	8	15
6 months and under 9 months	2	..	2	..	..	..	1	..	1	7	5	12
9 months and under 12 months	..	..	..	..	..	..	2	..	2	4	8	12
1 year and under 2 years	..	..	..	1	1	2	4	1	5	24	19	43
2 years and under 3 years	..	..	..	..	..	..	1	..	1	15	13	28
3 years and under 5 years	..	..	..	1	..	1	3	..	3	31	23	54
5 years and under 7 years	..	..	..	1	..	1	2	..	2	32	18	50
7 years and under 10 years	..	1	1	..	..	..	3	1	4	34	29	63
10 years and under 12 years	..	..	..	..	..	..	1	..	1	11	17	28
12 years and under 15 years	..	..	..	..	..	..	1	1	2	40	10	50
15 years and under 20 years	..	2	2	..	..	..	4	..	4	45	36	81
20 years and over	..	..	..	..	1	1	12	2	14	89	40	129
Totals, Ipswich Mental Hospital	**3**	**3**	**6**	**6**	**4**	**10**	**36**	**8**	**44**	**357**	**233**	**590**
MOSMAN HALL												
Under 1 month	6	..	6	1	..	1	4	..	4	9	..	9
1 month and under 3 months	29	..	29	..	..	..	1	..	1	11	..	11
3 months and under 6 months	14	..	14	..	..	..	1	..	1	10	..	10
6 months and under 9 months	8	..	8	..	..	..	..	..	..	10	..	10
9 months and under 12 months	1	..	1	..	..	..	..	..	..	6	..	6
1 year and under 2 years	3	..	3	..	..	..	1	..	1	23	..	23
2 years and under 3 years	..	..	..	..	..	..	..	..	..	9	..	9
3 years and under 5 years	2	..	2	..	..	..	1	..	1	34	..	34
5 years and under 7 years	..	..	..	..	..	..	1	..	1	17	..	17
7 years and under 10 years	1	..	1	..	..	..	..	..	..	11	..	11
10 years and under 12 years	..	..	..	..	..	..	..	..	..	7	..	7
12 years and under 15 years	..	..	..	..	..	..	..	..	..	6	..	6
15 years and under 20 years	..	..	..	..	..	..	..	..	..	4	..	4
20 years and over	..	..	..	..	..	..	1	..	1	7	..	7
Totals, Mosman Hall, Charters Towers	**64**	..	**64**	**1**	..	**1**	**10**	..	**10**	**164**	..	**164**
Grand Totals, all Hospitals	**283**	**313**	**596**	**329**	**188**	**517**	**211**	**176**	**387**	**2,432**	**2,091**	**4,523**

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* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under these headings.

TABLE XCI

POPULATION CHANGES AT EPILEPTIC HOME DURING THE YEAR 1958-59
PATIENTS AT 30TH JUNE, 1958: MALES 48 ; FEMALES 60 ; TOTAL 108
FOR YEAR ENDED 30TH JUNE, 1959

Age	Admitted		Discharged		To Ment. Hosp.		Deaths		Remaining		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
Under 5 years	..	..	..	..	..	..	..	..	..	..	..
5—10 years	1	..	..	..	..	..	..	..	1	..	1
10—15 years	1	3	..	3	..	..	..	..	5	4	9
15—20 years	..	..	1	1	1	..	..	..	4	7	11
20—25 years	..	..	..	1	..	..	..	..	9	4	13
25—30 years	..	..	..	..	..	..	..	..	5	3	8
30—35 years	..	..	..	1	1	1	..	..	9	4	13
35—40 years	..	..	..	..	..	..	..	..	2	6	8
40—45 years	..	1	..	..	..	..	..	1	1	9	10
45—50 years	..	..	..	..	..	..	..	..	5	5	10
50—55 years	..	..	..	..	..	..	..	1	3	4	7
55—60 years	..	..	..	..	..	..	..	..	..	4	4
60—65 years	..	..	..	..	..	..	..	..	..	1	1
Over 65 years	..	..	..	..	..	..	..	1	3	3	6
Totals	2	4	1	6	2	1	..	3	47	54	101

PATIENTS RESIDENT—

Under 5 years	28
5–10 years	18
10–15 years	20
15–20 years	12
Over 20 years	23
	101

CAUSES OF DEATH—

Female aged 73.	Acute Myocarditis, Epilepsy, Senility.
Female aged 54.	Mistral Stenosis, Endocarditis.
Female aged 42.	Coronary Occlusion, Hypertension, Epilepsy.

TABLE XCII

EXPENDITURE TABLE, EPILEPTIC HOME, FOR THE TWELVE MONTHS ENDED 30TH JUNE, 1959

Average Number Daily Resident—101

	£	s.	d.
Gross Expenditure	36,003	18	11
Collections	15,337	13	2
Net Expenditure	20,666	5	9
Gross Cost per patient per annum	356	9	5
Net Cost per patient per annum	204	12	4
Gross Cost per patient per week	6	16	6
Net Cost per patient per week	3	18	7

TABLE CXXIII

Yearly Summary of New Patients Treated at the Psychiatric Clinic, Classified in Age Groups According to Diagnosis, 1958–59

—	0–4		5–9		10–14		15–19		20–29		30–39		40–49		50–59		60 and over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Schizophrenia	1	..	..	..	1	1	6	6	10	8	17	20	5	13	4	8	..	3	44	59	103
Manic-Depressive	..	..	..	..	..	..	..	1	1	..	..	4	2	8	4	8	4	3	11	24	35
Paranoia and Paranoid States	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	1	3	4
Organic Psychoses ..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	1	1	1	1	4	3	7
Senile Psychoses	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	2	6	8
Other Psychoses	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Involutional Melancholia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1	..	1	3	4
																			63	98	161
Obsessive-Compulsive ..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	3	..	3
Psychoneuroses	..	..	1	..	2	2	5	5	7	24	18	35	15	19	2	12	1	9	51	106	157
Psychoneurosis with Psychosomatic Symptomatology	..	..	2	..	1	..	..	..	2	1	..	..	..	..	..	1	..	1	5	4	9
																			59	110	169
Alcoholism and Drug Addiction	..	..	..	..	..	..	..	..	1	..	1	..	2	..	1	..	1	..	6	..	6
Inadequate and Immature Personality	8	11	22	11	13	7	5	7	2	1	..	2	2	..	..	..	1	..	53	39	92
Pathological Personality ..	..	..	1	..	2	3	5	6	13	3	9	1	3	1	2	2	1	1	36	17	53
Organic	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Primary Childhood Behaviour Disorders ..	11	3	42	29	51	27	7	8	..	..	..	..	..	..	..	..	..	..	111	67	178
																			201	123	324
Epilepsy	..	1	1	1	1	2	1	..	4	1	..	1	..	1	..	..	..	..	7	7	14
Physical only	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	2	..	2
Mental Deficiency	4	11	12	7	12	3	7	5	2	4	2	2	..	..	..	1	..	..	39	33	72
Borderline Deficiency ..	1	..	6	..	4	2	1	..	..	..	..	..	..	..	..	..	..	..	12	2	14
																			51	35	86
Domestic Problems ..	..	..	..	..	..	..	..	..	..	4	2	1	..	..	..	..	..	..	2	5	7
Stammering	6	2	13	..	11	3	3	1	6	1	2	..	..	..	1	..	..	..	42	7	49
Dyslalia and Ret. Sp. Devt.	22	6	19	8	..	..	..	..	2	..	..	..	..	..	..	..	..	..	43	14	57
Cleft Palate	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
Aphasia and Dysphasia ..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	3	1	2	2	8	3	11
Laryngectomy	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2	..	2
Deaf and Partially Deaf ..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	2
Sigmatism	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Dysarthria	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	..	..	..	5	..	5
Hyperrhinophonia ..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
																			103	28	131
N.A.D.	..	..	1	..	2	1	..	..	..	1	1	..	..	..	..	..	1	..	5	2	7
Not yet diagnosed ..	2	3	3	1	5	2	1	2	..	..	1	2	3	..	..	..	..	1	15	11	26
Grand Total ..	57	38	124	57	106	55	43	41	52	48	55	69	38	46	23	37	16	28	514	419	933

TABLE XCIV

Sources of Referral of Patients to Psychiatric Clinic, Year ended 30th June, 1959

	Male	Female	Total
Personal	219	178	397
Commonwealth Government Departments ..	11	13	24
State Government Departments	98	54	152
Medical Practitioners	86	81	167
General and Mental Hospitals, Red Cross, &c. ..	69	81	150
Others	31	12	43
Grand Total	514	419	933

TABLE XCV

SHOWING ADMISSIONS, DISCHARGES, AND DEATHS AT THE WACOL REPATRIATION PAVILION DURING THE YEAR ENDED 30TH JUNE, 1959

Total number of patients on books as at 30th June, 1958	103
Transferred from Brisbane Mental Hospital	25
Admitted	..
	128
Discharged, recovered	4
Discharged, relieved	3
Discharged, not improved	3
Voluntarily left	3
Died	..
Transferred to Brisbane Mental Hospital	8
Absconded (Returned via B.M.H.)	..
	21

Total number of patients on books as at 30th June, 1959	107
Total number of patients on leave as at 30th June, 1959	4
Total number of patients in residence as at 30th June, 1959	103
Average number of patients daily resident	101

DIVISION OF LABORATORY SERVICES

LABORATORY OF MICRO-BIOLOGY AND PATHOLOGY

Director: J. I. Tonge, M.B., B.S. (Syd.), D.C.P. (Syd.), M.C.P.A.
Deputy Director: M. J. J. O'Reilly, M.B., B.S. (Syd.), M.C.P.A.
Pathologist: A. Davison, M.B., B.S. (Qld.), M.C.P.A.
Technical Supervisor: H. E. Brown

1. Statistical Summary.
2. Staff and Development.
3. Q Fever.
    - (*a*) Incidence: Geographic and occupational.
    - (*b*) Q fever in Western Queensland.
    - (*c*) Q fever in Meatworkers.
    - (*d*) Outbreak at Bremer River Abattoirs.
    - (*e*) Outbreak on Pineapple Farm.
    - (*f*) Observations on the duration and complications of Q fever.
    - (*g*) Fatal case associated with hepatic necrosis.
4. Brill's Disease (Recrudescent Epidemic Typhus).
5. Psittacosis.
6. Leptospirosis.
    - (*a*) Survey of animals.
    - (*b*) Typing of cultures.
    - (*c*) Agglutination-lysis tests.
7. Sensitivity Tests on Newly Isolated Strains of *M. Tuberculosis.*
8. Atypical Mycobacteria.
9. Salmonellas in Fertiliser.
10. Case of Torulosis.
11. Neonatal Tetanus.
12. Relative Sensitivities of Pathogenic Micro-Organisms to 6 Antibiotics.
13. Infections Due to *Mycobacterium Ulcerans.*
14. Histopathology.
15. Publications.

1. Statistical Summary, 1958–59

TABLE XCVI

1. Bacteriology

A. Specimen of Human Origin

Specimen	Mode of Examination	Number
Swabs—		
Throat Nose	Culture	344
	Direct Smear	5
	Antobiotic Sensitivity Test	117
	Coalgulase Test	75
Urethra Cervix Bartholin's Gland Anus	Culture	403
	Direct Smear	6,084
	Antibiotic Sensitivity Test	23
Swabs—*continued*		
Ear	Culture	43
	Direct Smear	2
	Antibiotic Sensitivity Test	32
Eye	Culture	34
	Antibiotic Sensitivity Test	14
	Coagulase Test	8
Bronchus	Culture	1
	Direct Smear	1
Sinus	Culture	4
	Antibiotic Sensitivity Test	4
Mouth	Culture	3
Wounds	Culture	10
	Direct Smear	1
	Antibiotic Sensitivity Test	9
Bowel	Culture	1
Pus	Culture	336
	Direct Smear	10
	Antibiotic Sensitivity Test	256
	Coagulase Test	55
Pleural Fluid	Culture	14
	Microscopic	7
Cerebrospinal Fluid	Culture	42
	Microscopic	73
	Antibiotic Sensitivity Test	2
Synovial Fluid	Culture	6
	Microscopic	1
	Antibiotic Sensitivity Test	3
Ascitic Fluid	Microscopic	3
Hydrocoele Fluid	Culture	3
	Microscopic	2
	Antibiotic Sensitivity Test	2
Pericardial Fluid	Culture	1
Gastric Lavage	Culture	1
	Microscopic	1
Tissue	Culture	4
Serous Exudate	Direct Smear	1,314
	Dark Ground Microscopy	3
Sputum	Culture	271
	Direct Smear	8
	Antibiotic Sensitivity Test	234

TABLE XCVI—*continued*

1. BACTERIOLOGY—*continued*

A. Specimens of Human Origin—continued

Specimen	Mode of Examination	Number
Blood	Culture	66
	Antibiotic Sensitivity Test	1
Urine	Culture	888
	Microscopic	1,771
	Antibiotic Sensitivity Test	388
Fæces	Culture	302
	Microscopic	20
	Antibiotic Sensitivity Test	3
Post-Mortem Swabs and Tissues	Culture	41
	Direct Smear	2
Virulence Tests for Corynebacterium Diphtheriæ	..	1
	Total 1958–59	13,353
	Total 1957–58	13,098

TUBERCULOSIS SECTION

Specimen	Mode of Examination	Number
Sputum	Culture	6,556
	Microscopic	6,556
	Animal Inoculation	93
Gastric Aspiration	Culture	2,362
	Animal Inoculation	869
Laryngeal Swab	Culture	60
Urine	Culture	153
	Animal Inoculation	70
Pus	Culture	23
	Microscopic	23
	Animal Inoculation	26
Pleural Fluid	Culture	25
	Microscopic	25
	Animal Inoculation	28
Cerebrospinal Fluid	Culture	4
	Microscopic	4
	Animal Inoculation	4
Pericardial Fluid	Culture	1
	Microscopic	1
	Animal Inoculation	1
Ascitic Fluid	Culture	2
	Microscopic	2
	Animal Inoculation	1
Synovial Fluid	Culture	3
	Microscopic	3
	Animal Inoculation	2
Tracheal Washing	Culture	12
	Microscopic	12
Ulcer Swab	Culture	5
	Microscopic	5
	Animal Inoculation	2
Sinus Swab	Culture	1
	Microscopic	1
	Animal Inoculation	1
Prostatic Swab	Culture	1
	Microscopic	1
	Animal Inoculation	1

TABLE XCVI—*continued*

TUBERCULOSIS SECTION—*continued*

Specimen	Mode of Examination	Number
Fæces	Culture	5
	Microscopic	5
	Animal Inoculation	3
Lymph Glands	Culture	18
	Microscopic	18
	Animal Inoculation	8
Skin	Culture	1
	Microscopic	1
	Animal Inoculation	1
Mouse Tissues	Culture	4
	Microscopic	4
Lung Swab	Culture	1
	Animal Inoculation	1
Tissue	Culture	37
	Microscopic	36
	Animal Inoculation	11
Culture	Identification	15
	Sensitivity Test	229
	Total 1958–59	17,337
	Total 1957–58	17,989

B. Foods and Waters

Specimen	Mode of Examination	Number
Water	Culture	170
	Plate Count	170
Milk	Culture	406
	Plate Count	406
	Reductase Test	410
	Animal Inoculation	13
Cream	Culture	7
	Plate Count	7
	Reductase Test	7
Ice Cream	Culture	28
	Plate Count	28
Butter	Culture	7
	Plate Count	7
Ice Block	Culture	9
	Plate Count	9
Yoghurt	Culture	2
	Plate Count	1
Confectionery	Culture	1
	Plate Count	1
Ice Cream Mix	Culture	2
Bread	Culture	3
Oysters	Culture	18
Soft Drinks	Culture	26
Dripping	Culture	1
Peanut Oil	Culture	2
Soups	Culture	10
Dehydrated Mushrooms	Culture	1
Crab Meat	Culture	1
Flour	Culture	9
Chicken Roll	Culture	1
Sausage	Culture	13
Rice	Culture	2
Vanilla Essence	Culture	1
Sugar	Culture	1
Liquid Whole Egg	Culture	2
Stewed Beef	Culture	2
Coconut	Culture	21
	Total 1958–59	1,805
	Total 1957–58	2,118

TABLE XCVI—*continued*

C. Various Materials

Specimen	Object of Examination	Number
Disinfectants and Antiseptics	Rideal-Walker Co-efficient	62
	Germicidal Value	4
Bottles	Sterility	27
Glasses	Sterility	10
Bacterial Cultures	Identification	9
Balloons	Culture	6
Tetra Pak Container	Culture	1
Talc Powder	Culture	5
Swabs from Drain	Culture	2
Swabs from Kitchen Utensils	Culture	6
Hospital Linen	Culture	4
Plastic Transfusion Set	Culture	1
Fertiliser	Culture	6
Penicillin Tablets	Potency	1
Brine	Culture	3
Laying Mash	Culture	2
Nail Clippings	Culture	1
Skin Scrapings	Culture	8
	Antibiotic Sensitivity Test	1
	Total 1958–59	159
	Total 1957–58	147

2. Serology

——	Number
Serum Agglutination (Screen)—	
Erbethella typhosa (H)	3,946
Salmonella paratyphi (H)	3,928
Salmonella schottmülleri (H)	3,932
Proteus OX19	3,922
Proteus OXK	3,922
Brucella abortus	3,946
Leptospira icterohæmorrhagicæ	4,631
Leptospira canicola	4,631
Leptospira australis A	4,631
" Robinson " Strain of *leptospira*	4,631
Leptospira australis B	4,631
" Esposito " Strain of *leptospira*	4,631
Leptospira pomona	4,631
Leptospira grippotyphosa	4,631
Leptospira medanensis	4,631
Leptospira kremastos	4,631
Leptospira mini	4,631
Leptospira hyos	4,631
Leptospira celledoni	4,631
Leptospira autumnalis	4,631
Leptospira cynopteri	1
Coxiella burneti	125
Streptococcus MG	6
Cold Agglutinins	6
Serum Agglutination Tests (Quantitative)	1,807
Paul Bunnell Tests	460
Leptospiral Strains Typed (13) Agglutination Tests Performed in Typing	221
Leptospiral Antisera Prepared	..
Leptospiral Antisera Absorbed	..
Complement Fixation Tests—	
Coxiella burneti—	
Routine	5,818
Quantitative	1,118
Typhus Fever Murine (Soluble)—	
Routine	674
Quantitative	155
Rickettsia mooseri (washed)—	
Quantitative	19
Rickettsia prowazeki (washed)—	
Quantitative	19
Psittacosis (E.A.E. Virus)—	
Routine	2,636
Quantitative	248
Psittacosis Control Antigen	950
Eagle Wassermann (Serum)—	
Routine	6,406
Quantitative	29
Eagle Wassermann (C.S.F.)	179
Kline	7,412
Kahn	738
Lange Colloidal Gold Reaction (C.S.F.)	677
Total 1958–59	118,134
Total 1957–58	97,160

TABLE XCVI—*continued*

3. Biochemistry

Specimen	Examined For—	Number
Whole Blood	Urea	593
	Glucose	81
	Uric Acid	201
	Chloride	18
	Pigments	32
Plasma	Protein	1
	Fibrinogen	1
Serum	Protein	879
	Cholesterol	116
	Bilirubin	503
	Chloride	33
	Calcium	73
	Inorganic phosphate	28
	Acid phosphatase	98
	Alkaline phosphatase	499
	Thymol turbidity	468
	Thymol flocculation	468
	Zinc sulphate turbidity	468
	Paper electrophoresis	541
	Amylase	23
	Cholinesterase	1
	Bicarbonate	5
	Sodium	12
	Potassium	9
Cerebrospinal Fluid	Protein	76
	Globulin	57
	Chloride	65
	Glucose	68
	Urea	12
Pleural Fluid	Chloride	1
Hydrocœle Fluid	Urea	1
Urine	Albumin	1,829
	Sugar	1,857
	Pigments	4
	Bilirubin	6
	Urobilin	4
	Urobilinogen	3
	Chloride	1
	Calcium	1
	Inorganic phosphate	3
	Bile	2
	Creatinine	1
	Diastase	7
	Porphobilinogen	1
	U.V. Fluorescence	1
Fæces	Total, Split and Unsplit Fats	84
	Occult Blood	73
	Creatorrhœa	5
	Trypsin	1
Renal Calculi	Chemical constitution	21
Gastric Juice	Acidity	2
	Mucus	2
	Bile	2
	Hydrochloric Acid	2
	Blood	2
Functional Tests	Glucose tolerance tests	189
	Urea clearance tests	60
	Urea concentration tests	61
	Fractional test meals	53
	Total 1958–59	9,708
	Total 1957–58	8,897

TABLE XCVI—*continued*

4. HAEMATOLOGY

——	Number
Cell Counts—	
Red Cells (Total)	243
Red Cells (Stippled)	964
Reticulocytes	20
White Cells (Total)	2,345
White Cells (Differential)	2,627
Platelet Count	47
Haemoglobin	9,441
Haematocrit	5,643
Sedimentation Rate	827
Coagulation Time	67
Bleeding Time	66
Prothrombin Time	10
Clot Retraction Time	1
Red Cell Fragility	13
Le Cells	10
Blood Grouping (A.B.O.)	3,316
Blood Grouping (Rh)	3,316
Rh Antibodies	1,013
Total 1958–59	29,969
Total 1957–58	29,079

5. PARASITOLOGY

Specimen	Object of Examination	Number
Faeces	Amoebae (Cysts and Vegetative)	50
	Helminth ova	501
Pus	*Trichomonas vaginalis*	9
Blood	*Plasmodium sps.*	18
Helminth	Identification	6
	Total 1958–59	584
	Total 1957–58	500

6. VARIOUS TESTS

——	Number
Male Toad Test (Pregnancy)	2,225
Aschheim Zondek Test (Quantitative)	15
Casoni Skin Test	3
" Cat-Scratch " Skin Test	6
Seminal Fluid Assessment	20
Total 1958–59	2,269
Total 1957–58	2,205

TABLE XCVI—*continued*

7. HISTOLOGY

Tissue Sections Prepared	Number
Human—	
Biopsy (specimens received 3,980)	6,456
Post-Mortem	2,248
Medico-Legal Tissues	60
Animal Tissues	21
Total 1958–59	8,785
Total 1957–58	8,270

8. EXFOLIATIVE CYTOLOGY

Specimen	Number
Sputum	1,083
Bronchial or Tracheal Washing	31
Pleural Fluid	15
Miscellaneous	11
Total . . 1958–59	1,140
Total . . 1957–58	1,113

9. MEDICO-LEGAL

Specimen	Object of Examination	Number
Clothing and Various Articles	Blood	207
	Spermatozoa	114
Vaginal Smears	Spermatozoa	50
Tissue	Histopathology	60
Blood	Grouping	14
	Identification	2
Blood-Stained Articles	Blood Grouping	6
Scrapings	Presence of Blood	10
	Determination of Blood Group of Stains	4
	Identification	2
Hair	Identification	21
Skull	Identification	1
Skeleton	Identification	1
Urine	Spermatozoa	1
Earth	Presence of Blood	5
	Total 1958–59	498
	Total 1957–58	334
Post-Mortem Examinations	Total 1958–59	610
	Total 1957–58	652
Attendances at Courts	Supreme Court	25
	Police Court	27
	Coroner's Court	4
	Other Courts	8
		64

2. STAFF AND DEVELOPMENT

Mr. D. J. W. Smith, Senior Bacteriologist, was awarded a W.H.O. Travelling Fellowship and proceeded overseas in March to visit U.S.A., Great Britain and Europe. The main purpose of his visit is to study recent advances in the diagnosis of rickettsial and virus diseases and to make contact with other Leptospiral Reference Laboratories.

The work carried out by the laboratory again shows a steady increase in volume and this has been most evident in the Serology section. The accommodation has been taxed to its limit and the staff have been working under substandard and gross overcrowded conditions. Fortunately some relief is to be made available in the existing building in the near future. This will provide an additional laboratory for histopathology, a laboratory for the phage typing of staphylococci, and improved accommodation for patients.

Much thought and time has been devoted to planning of the laboratories for the projected new building in George Street. These plans have made provision for a virus diagnostic unit, a mycology and medico-legal laboratory as well as for expansion of all the various sections of clinical pathology, morbid anatomy and public health bacteriology Adequate space has been allowed for the preparation of diagnostic kits for distribution to country centres. It is to be hoped that this building will be erected as soon as possible so that the laboratory can then cope with the steadily increasing demands made upon it.

Draft plans have been prepared for a new animal house at the Normanby to replace the present makeshift building. Provision has been made for adequate breeding stock of guinea pigs, rabbits, mice, and rats as well as for the holding of sheep. The building is to be used mainly for breeding but two small animal rooms, a laboratory and post-mortem room are to be provided for experimental work with infected animals, which will be isolated from the breeding area. It was considered necessary to provide facilities for experimental work as the animal house on the roof of the George Street building may well be taxed to capacity when the virology section is functioning.

The final plans for the new city morgue were completed early in the financial year and are very satisfactory. The building will be most dignified and will cater satisfactorily for the pathologists, public, police and students. After considerable controversy concerning the site, the erection of the building has already commenced in the Domain. It is anticipated that it will be ready for use by the end of 1960.

During the year the close collaboration with the Queensland Institute of Medical Research has continued and assistance has been provided in a number of research projects. In our capacity as Leptospiral Reference Laboratory leptospiral cultures have been typed and both antisera and stock cultures provided for laboratories both interstate and abroad.

3. Q FEVER

(*a*) *Incidence*: *geographic and occupational*

In the period 1956-57, seventy-six cases of Q fever were diagnosed, in 1957-58, one hundred and ninety-four and in the current year, four hundred and ten cases in Queensland. These cases were recent infections as indicated by either a complement fixation titre for *Coxiella burneti* of 1:64 or greater, or a significant rise in titre in paired sera. In addition to the above proven cases a further one hundred and sixteen patients had serum titres of 1:32 or 1:16 in single samples. Many of these undoubtedly were from patients with acute infections but paired sera were unavailable or the sera were not collected at the optimum period. Twenty-seven proven cases of Q fever were diagnosed from New South Wales. The geographical distribution of these cases is set out in Table XCVII.

TABLE XCVII

GEOGRAPHICAL DISTRIBUTION OF Q-FEVER CASES DIAGNOSED IN LABORATORY

(1ST JULY, 1958—30TH JUNE, 1959)

QUEENSLAND	
Metropolitan District	229
Darling Downs District	35
Maryborough District	18
Rockhampton District	31
Townsville District	6
Cairns District	12
Central West District	26
Far West District	14
Roma District	2
South West District	37
Total	410
NEW SOUTH WALES	
Tenterfield District	17
Northern Rivers District	4
Broken Hill	5
Newcastle	1
Total	27

It can be seen that Q fever is widely endemic in Queensland, and the fact that 27 cases were diagnosed from the very limited number of sera submitted from N.S.W. suggests that the disease is also widespread in that State.

The disease at present appears to be associated with three main occupational groups (*a*) meatworkers, (*b*) shearers and those associated with the sheep industry, and (*c*) dairy farmers in decreasing order of incidence. The occupational distribution of the cases is set out in Table XCVIII. As might be expected there is a marked preponderance of males affected, in the present series there being 399 males and 11 females.

(*b*) *Q fever in Western Queensland*

The occurrence of Q fever in Queensland in association with sheep was mentioned for the first time in last year's Annual Report. Reports of outbreaks on a sheep station near Tambo and at a Brisbane fellmongery.

TABLE XCVIII

OCCUPATIONAL DISTRIBUTION OF Q-FEVER CASES DIAGNOSED IN LABORATORY

(1ST JULY, 1958—30TH JUNE, 1959)

QUEENSLAND	
Meat Industry—	
Abattoir workers	221
Sundry occupations associated with abattoirs	26
Butchers	8
Pastoral Industry—	
Shearers	47
Station hands and workers associated with sheep	26
Graziers	4
Dairying Industry—	
Dairy farmers	16
Mixed farmers	10
Others—	
Veterinary surgeons	2
School children	5
Pineapple farmers	4
Housewives	3
Tradesmen	6
Unstated	32
Total	410
NEW SOUTH WALES	
Meatworkers	20
Sheep station hands	4
Others	3
Total	27

(*c*) *Q fever in Meatworkers*

The occurrence of Q fever in association with the pastoral industry has only recently attained significance and these cases have contriubted to the overall increased incidence of the disease. The vast majority of cases have however, been associated with the meat industry and one has to look for some factor within the industry which has been responsible for this increase.

About 18 months ago a new export trade of boneless beef to the United States of America commenced. This has provided a ready market for animals of poor condition which normally would not have been acceptable for slaughter. The proportion of old cows being slaughtered is high and of these, sometimes up to 80 per cent., are pregnant. During slaughtering of these cows the placentas are handled and those infected could provide a dense concentration of rickettsiae for airborne dissemination. The increased incidence of Q fever in meatworkers is probably not associated with any change in the processing methods but rather with the type of animals being slaughtered. In addition this export trade has caused an increase in the volume of work and new hands have had to be employed, most of whom are young and new to the industry and have no immunity to the disease. Although details are as yet unavailable it is probable that the incidence of Q fever will show a close relationship to the export of this boneless beef and as long as this trade continues it may be anticipated that the high incidence will prevail.

(*d*) *Outbreak of Q fever at Bremer River Abattoir*

As an example of the effect of this export trade there occurred at the Bremer River Abattoir a severe outbreak of Q fever. The works are of modern design and were only completed in October, 1958. The layout is good and working conditions are satisfactory. The majority of the personnel were new to the industry and had no immunity to the disease. Since the commencement of operations this abattoir has been largely concerned with the export trade of boneless beef with a high proportion of old pregnant cows being slaughtered. In the period January to June 1959, a total of 58 persons out of the staff of 110 were infected with Q fever. All those regarded as positive showed a significant rise in the complement fixation test titres in paired sera. The doubtful cases failed to show a significant titre but antibodies in low titre were present. Those with stationary titres in paired sera were regarded as indicating "hangover" from previous infection. The details are set out in Tables XCIX and C.

TABLE XCIX

OUTBREAK OF Q FEVER AT BREMER RIVER ABATTOIRS
(JANUARY–JUNE, 1959)

——	Total Staff	Number Tested	Positive	Negative	Doubtful	Old Infections
Works personnel	104	86	54	19	8	5
Meat inspectors	4	3	2	1	..	..
Others (Construction)	2	2	2	..	..	..
Totals	110	91	58	20	8	5

TABLE C

OUTBREAK OF Q FEVER AT BREMER RIVER ABATTOIRS SHOWING WORKING PERIOD IN MEAT INDUSTRY

——	Under 6 months	6 months to 1 year	More than 1 year
Positives	35	5	18
Negatives	11	2	7
Doubtful	5	1	2
Old Infections ..	..	..	5
Totals ..	51	8	32

(*e*) *Outbreak of Q fever on a Pineapple Farm*

Between October and December 1958 (a period of 9 weeks) a family consisting of a father, mother and four grown-up sons became infected with Q fever on a pineapple farm near Palmwoods. Investigations to date have failed to reveal the source of the infection. There were no cows on the property and there was no evidence of *C. burneti* in 37 of 40 cows in the herd from which their fresh milk was supplied to them. A fertiliser which was used on the farm was suspected and examined without success. It is unlikely to have been the cause of the infection as its constituents (bones and offal, &c.) are subjected to very high temperatures during preparation. Native animals which are numerous in the neighbouring scrub appear to be the most likely source of the infection. To date only one bandicoot has been examined but neither it nor the ticks it carried showed evidence of *C. burneti*. The investigation is proceeding.

(*f*) *Observations on the duration and complications of Q fever*

Q fever has long been regarded as an acute febrile illness in which complications are rare and convalescence usually rapid. In the course of a follow-up study of a large series of patients one forms the impression, however, that convalescence is prolonged in about 10 per cent. and some patients are not really well for periods up to 6 months of longer. Liver involvement is common and jaundice occurs in about 5 per cent. Repeated animal inoculations of both blood and urine have been made from 8 patients whose convalescence was unduly prolonged. This was done in an endeavour to demonstrate prolonged survival of rickettsiae. In no case were isolations successful.

One particular patient, a meat inspector, is of singular interest in that he developed in 1953 an acute attack of Q fever confirmed in this laboratory by a rise in titre in the complement fixation test from nil to 1:126 with *C. burneti*. In 1959 this patient was admitted to hospital with an acute febrile illness, resembling Q fever clinically, from which he recovered without specific therapy. At this time his C.F. titre was 1:512. He is known to have a mitral stenosis but is now otherwise well. The survival of such a high titre six years after his original attack is most unusual. It is improbable that this later illness represents a second attack of Q fever but it may indicate a harbouring of rickettsiae in his system. The mitral lesion may be of significance in this regard. Repeated animal inoculations of blood and urine have not led to the isolation of any rickettsiae.

From abroad have come reports (Evans et al. (1959) Lancet 1, 865. and Marmion, personal communication) of the association of endocarditis with Q fever. With this in mind every endeavour is being made to investigate those who are chronically ill after infection. Of interest in this regard was a wheat farmer aged 38 years who was admitted to hospital in July 1957 with an illness resembling subacute bacterial endocarditis. No organism could be recovered on repeated blood cultures but a C.F. titre for *C. burneti* of 1:256 on 31st July, 1958, was obtained and thirteen days later the titre had risen to 1:512. He was acutely ill and died soon afterwards. A post mortem diagnosis of endocarditis was made. Two years later the sections from the heart valve were reviewed and organisms morphologically identical with *C. burneti* were found. It is unfortunate that no positive diagnosis could be made in the absence of isolation of the rickettsia from the bloodstream at the time of his fatal illness.

All cases of Q fever with prolonged symptoms or cardiac lesions are obviously worthy of intensive investigation. The disease is probably more often associated with serious sequelae than is generally realised.

(g) *Fatal case of Q fever associated with hepatic necrosis*

A report has been prepared for publication of a meatworker, aged 52 years, who developed an acute attack of Q fever. Enlargement of the liver appeared on the twelfth day, and jaundice on the fourteenth. He died on the seventeenth day. Autopsy showed very intensive necrosis of the liver. It is uncertain to what extent this was due to *C. burneti*. There were also acute inflammatory lesions in the lung, brain and kidney. His death occurred in 1947.

4. Brill's Disease (Recrudescent Epidemic Typhus)

A report has been prepared for publication of a patient with Brill's disease which was diagnosed in this laboratory. The patient, a Polish migrant aged 33 years, had had epidemic typhus whilst a prisoner of war in Southern Russia in 1942. After a period of war service he migrated to Australia in 1952. In March 1958 he became ill with a severe headache and a mild febrile illness lasting almost 12 days. The serological data are set out in Table CI. This represents the first case of Brill's disease known to have occurred in Australia.

TABLE CI

Serological Tests on Case of Brill's Disease

Test	Antigen	Serum obtained on Day of Disease			
		10	16	24	185
Agglutination	Proteus OX19	128*	16	16	Nil
Complement fixation	R. prowazeki (washed) ..	512	512	256	32
Complement fixation	R. mooseri (washed)	32	128	64	8

* Titres are expressed as reciprocals.

5. Psittacosis

In the period July to December, 1958, four cases of psittacosis were diagnosed. In these the history was suggestive and complement fixation tests using an antigen prepared from Epidemic Abortion of Ewes virus, were performed. It became evident that tests for psittacosis should be included in the routine battery of tests performed on sera from all cases of pyrexias of unknown aetiology and this has been done since January, 1959. As a result a further eight cases have been recognised. The distribution of the 12 cases is as follows: Brisbane 4, Canungra 2, Atherton 2, Cairns 1, Crows Nest 1, Melbourne (Vic.) 1, Northern Rivers (N.S.W.) 1. Details of these patients are set out in Table CII.

In addition two further patients from Brisbane and Charleville respectively gave C.F. titres of 1:32 in a single serum sample. Neither paired sera nor clinical information could be obtained so these patients have been excluded from the list. In the routine use of the E.A.E. virus antigen as a screen occasionally sera have been found to give titres of 1:8 or 1:16 but these have not been regarded as diagnostic. The significance of these low titres is being studied.

6. Leptospirosis

(a) *Survey of animals for leptospiral infection*

This survey has been continued in collaboration with the members of the Field Station of the Queensland Institute of Medical Research. The interpretation of the results is difficult and the same limitations as recorded in the two previous annual reports apply. A summary of the results is set out hereunder and is a continuation of last year's report. It is regretted that owing to pressure of routine work that results of all the sera submitted are as yet incomplete.

The sera collected are from 417 animals in the following group:—

Marsupials	52
Rodents	268
Bats	18
Birds	2
Reptiles	5
Toads	9
Cattle	56
Domestic cats	6
Dog	1

Serological results are complete for 253 of these animals. New host records, proved by identification of leptospires isolated in culture, have included the "Robinson" serotype from *Uromys caudimaculatus, L. hyos* from *U. caudimaculatus,* and *L. celledoni* from *Melomys cervinipes* and *Rattus assimilis.*

Marsupials.—

Perameles nasuta: 21 submitted. Serology of 15 showed *australis A* + *hebdomadis* group 1, *hebdomadis* group 4. Leptospires belonging to the *hebdomadis* group were isolated from 3.

Thylacis macrourus: 26 submitted. Serology of 15 showed *australis B* 1, *australis B* + *hebdomadis* group 1, *hebdomadis* group 1.

Protemnodon agilis: 7 submitted. Negative.

TABLE CII

SOME DETAILS OF CASES OF PSITTACOSIS DIAGNOSED IN LABORATORY (JULY 1958–JUNE 1959)

Case No.	Sex	Age	Locality	Serum Number	Day of Disease	Complement Fixation Titre	History
1	F.	35	Brisbane (Grange)	23595/58 24671/58	6 17	*16 32	Fluctuating temperature 7 days up to 105° F. Lung shadow R. mid-zone. Worked in bird shop for 4 weeks prior to onset.
2	M.	24	Brisbane (Tingalpa)	25009/58 25988/58 26624/58	12 22 32	128 128 128	Generalised muscular aches and headache. Rash, jaundice. Glandular enlargment and albuminuria. Keeps budgerigars, half were sick 3 weeks prior to illness and 3 died.
3	F.	61	Atherton ..	26872/58 27571/58	42 49	32 64	High fever for 2 weeks recurring 4 weeks later with headache, photophobia, rigors, dyspnoea. Responded to Terramycin. Has a budgerigar purchased 1 week prior to onset of illness. Bird died with breathlessness.
4	M.	67	Melbourne, Victoria	27565/58 28530/58	? ?	8 256	Bird shop proprietor in Melbourne. Became ill whilst on holidays in Brisbane.
5	M.	61	Brisbane (Coorparoo)	474/59	1 month	512	Rigors and muscle pains—transport driver.
6	F.	20	Brisbane (Bowen Hills)	2403/59 3914/59	4 20	64 64	Moderately severe illness. Contact with sick budgerigar.
7	M.	55	Pinelands, via Crows Nest	3795/59 3796/59 9574/59	4 16 58	.. 32 128	Severe illness, albuminuria, vomiting, muscle pains, headache, rigors. Farmer and keeps ducks and chickens.
8	?	?	Cairns ..	4648/59 4649/59	? ?	16 32	No history available.
9	M.	16	Atherton ..	7824/59 9968/59	12 37	16 32	Vomiting, malaise 10 days, adenitis, mild fever. Contact with farm animals, mites and ticks. Has cockatoo. Cares for fowls. Neighbours have budgerigars.
10	M.	43	Canungra ..	8204/59 9363/59	8 22	.. 128	Severe headache, fever, neck stiffness, chest pain. Temperature 104°F. Opacities in R. lower lobe. Recurrence of fever for days.
11	F.	14	Canungra ..	9044/59 10118/59	16 28	32 64	Daughter of case 10. Fever, consolidation L. lung base. Both cases 10 and 11 had contact with wild parrots (Mountain Lory and "greenies") kept as pets which became sick and died after 1 year of captivity. Another son aged 11 became ill at same time.
12	M.	49	Northern Rivers, New South Wales (Grafton Hospital)	13455/59 15453/59	16 33	8 64	Railway fettler, severe illness, rigors and pyrexia.

* Complement fixation titres are expressed as reciprocals.

Hypsiprymnodon moschatus: 1 submitted. Negative.

Rodents.—

Hydromys chrysogaster: 9 submitted. Serology of 6 showed 1 *australis* A infection.

Uromys caudimaculatus: 27 submitted. Serology of 7 showed 1 with *australis B* + *australis A* antibodies. (Isolation of "Robinson and *hyos* recorded under mark-release experiments.)

Melomys spp.: 84 submitted. Serology of 59 negative. *L. celledoni* isolated from 1.

Rattus assimilis: 100 submitted. Serological results for 61 showed possible *icterohaemorrhagiae* 1, *australis B* 2, *australis A* + *hyos* 1, *pomona* 5, *hyos* 2. *L. celledoni* was isolated from an animal which had antibody titre of 1:30 to it. Leptospires were detected by dark-ground examination in one animal with antibodies to *L. pomona,* and in two additional animals for which serological results are not completed.

Rattus rattus: 26 submitted. Serology of 11 negative.

Rattus norvegicus: 1 submitted. Negative.

Mus musculus: 13 submitted. Serology of 9 negative.

Bats.—

Pteropus conspicillatus: 7 submitted. Serological results of 5 showed 2 *australis A*.

Miniopterus schreibersi: 4 submitted, *M. australis* 1, *Rhinolophus megaphyllus* 5, *Nyctophilis bifax* 1. Serological results of 2 *M. schreibersi.* 1 *R. megaphyllus* and 1 *N. bifax* negative.

Reptiles.—

Stegnotus plumbeus: 1 submitted. Negative.

Denisonia sp.: 1 submitted. Negative.

Varanus varius: 1 submitted. Negative.

Amphibia.—

Bufo marinus: 9 submitted. Serological results from 3 negative.

Domestic Animals.—

Cattle: 56 examined (sera only). Of 10 animals from two farms on which leptospirosis had occurred, 1 had antibodies to *australis A* and 9 to *pomona;* of 30 from a survey at Daintree, 22 showed antibodies to a titre of 1:100 or more against *australis B* 1, *canicola* 1, *australis A* 11, *hyos* 14, *celledoni* 1 (6 showed antibody patterns for two serotypes).

Cats: 6 examined. 3 negative; no serological results available for 3.

Dog: 1 examined. Negative.

(*b*) *Typing of leptospiral cultures*

Thirteen culture of leptospirae have been typed during the year. Of these 6 were isolated from animals, and seven were of human origin. Three cultures from bandicoots (*Perameles nasuta*) belonged to the Hebdomadis sero group, one culture from *Rattus assimilis* was *L. celledoni* and 2 cultures obtained from *Uromys caudimaculatus* were identified as *L. hyos* and the "Robinson" type.

The human strains which were submitted from Cairns and Innisfail consisted of *L. australis A,* 5: *L. icterohaemorrhagiae* 1, and *L. celledoni* 1.

(*c*) *Agglutination-lysis tests for leptosporisos*

In the period July, 1958—June, 1959, 4,631 sera have been tested with the agglutination-lysis test using fourteen leptospiral strains. Sera from 322 patients showed antibodies to one or more leptospira, and of these the titres obtained in 160 indicated probable recent infections. It is exceedingly difficult if not impossible in many cases to determine the causative type of leptospira from the agglutination pattern in human sera. Cross agglutination is common and not infrequently higher titres are obtained with heterologous strains. It would appear, however, that *Leptospira pomona* and *L. hyos* have been the most common cause of infection during the period under review.

7. SENSITIVITY TESTS ON NEWLY ISOLATED STRAINS OF M. TUBERCULOSIS

Since July, 1956, sensitivity tests with streptomycin, paraminosalicylic acid and isonicotinic acid hydrazide have been made on those strains of *M. tuberculosis* isolated from new and hitherto untreated cases.

For the sensitivity tests the drugs in the following strengths, streptomycin 100, 10 and 2 micrograms/mil., P.A.S. 100, 10 and 1 micrograms/mil. and I.N.A.H. 5, 1 and 0·2 micrograms/mil., respectively are incorporated in Lowenstein-Jensen medium. The results obtained to date are set out in Table CIII. For convenience the results with only the intermediate strength of the drug are recorded.

TABLE CIII

SENSITIVITY RESULTS OF *M. tuberculsosis* FROM UNTREATED PATIENTS

Period	Drug	Number Resistant	Number Partly Resistant
1–7–56 to 30–6–57 . .	Streptomycin (10 mcgs. per ml.)	14 (10 per cent.)	17
	P.A.S. (10 mcgs. per ml.)	2 (1·4 per cent.)	5
	I.N.A.H. (1 mcgs. per ml.)	4 (2·9 per cent.)	8
	Total cultures tested . . 139		
1–7–57 to 30–6–58 . .	Streptomycin (10 mcgs. per mil.)	1 (0·6 per cent.)	14
	P.A.S. (10 mcgs. per mil.)	3 (1·9 per cent.)	2
	I.N.A.H. (1 mcg. per mil.)	15 (9·3 per cent.)	8
	Total cultures tested . . 162		
1–7–58 to 30–6–59 . .	Streptomycin (10 mcgs. per mil.)	9 (7 per cent.)	4
	P.A.S. (10 mcgs. per mil.)	8 (5·7 per cent.)	7
	I.N.A.H. (1 mcgs. per mil.)	10 (7·1 per cent.)	9
	Total cultures tested . . 141		
1–7–56 to 30–6–59 . .	Streptomycin (10 mcgs. per mil.)	24 (5·4 per cent.)	35 (7·9 per cent.)
	P.A.S. (10 mcgs. per mil.)	13 (2·9 per cent.)	14 (3·1 per cent.)
	I.N.A.H. (1 mcgs. per mil.)	29 (6·5 per cent.)	25 (5·6 per cent.)
	Total cultures tested . . 442		

8. Atypical Mycobacteria

In view of the abnormally high rates of tuberculin-reactors amongst children in North Queensland particular attention is being paid to atypical mycobacteria which are encountered in the course of the routine investigations in the tuberculosis laboratory. It is thought that some of these reactions to tuberculin may be caused by contact with mycobacteria of mild pathogenicity which, while causing inapparent infection, produce allergy to some constituent of tuberculin.

One such culture was obtained from a chronic skin lesion in a boy aged 10 years. The organism was acid-fast and produced a profuse growth on Lowenstein-Jensen medium at both 28°C. and 37°C. in 48 hours. In addition it grew well on blood agar and nutrient agar at both temperatures. Inocculation subcutaneously into rabbits and guinea pigs produced no lesion but abscesses occurred in the kidneys and lungs of mice following inoculation by the intraperitoneal route. The organism was completely resistant to Streptomycin, P.A.S. and I.N.A.H. The organism is no mere saprophyte and has some features in common with *M. fortuitum*. Investigations are proceeding.

As further examples, mycobacteria were isolated from the sputum of three patients with pulmonary disease, and these grew rapidly at both 37°C. and 28°C., were resistant to all three drugs and failed to produce lesions in rabbits or guinea pigs.

It is difficult to classify many of these organisms as growth characteristics, drug sensitivity and microscopic appearance appear to be unreliable criteria. It is impossible at this stage to determine the frequency or significance of these atypical strains.

9. Salmonellas in Fertiliser

During the last 6 months of 1958, twenty-four samples of commercial garden fertiliser were submitted for examination and Salmonellas were isolated from four. The typing was performed by Dr. Atkinson of the Salmonella Reference Laboratory, Adelaide, who classified them as *S. senftenberg*, 1; *S. newbrunswick* or *kinshasa*, 2; *S. vejle, moester, anatum* or *nyborg*, 1.

10. Case of Torulosis

One case of torulosis was diagnosed during the year. The patient was an aboriginal female aged 38 years from the Doomadgee Mission, via Burketown. She had complained of dizziness and headache for over 6 weeks, culminating in epileptiform seizures. *Torula histolytica* was isolated from the cerebrospinal fluid. The patient was transferred to the Townsville hospital but died within a few days.

11. Neonatal Tetanus

In May, 1958, a child aged 9 days was admitted to the Children's Hospital suffering from tetanus. The child had had a normal birth at a suburban private hospital. Investigation of the hospital revealed that the autoclave was out of commission but the umbilical pads were being sterilized in a pressure cooker, then placed in a jar of methylated spirits. The cord ties were boiled and then similarly stored in methylated spirits. No organisms were grown from the umbilical pads but from the cord ties *Clostridium tetani* was isolated. This was confirmed by animal inoculation and at the Department of Bacteriology at the University of Queensland.

In this particular hospital the cord ties had at no time been subjected to any process likely to kill spore-bearing organisms. In addition the container used for keeping the ties had a most insecure lid, which would readily allow contamination to occur. The occurrence highlights the necessity for repeated checks on the sterilization techniques used in hospitals.

12. Relative Sensitivities of Pathogenic Micro-Organisms

A statistical summary has been compiled of the relative sensitivities to 6 currently used antibiotics of 2,841 pathogenic micro-organisms isolated during the period January 1st, 1956, to June 30th, 1959. In all sensitivity tests Evans' Sentests were used in the following concentrations on nutrient agar:—

Penicillin—0.5 I.U. and 2.5 I.U. per tablet.
Streptomycin—20 and 80 mcg. per tablet.
Chloramphenicol—40 and 100 mcg. per tablet.
Aureomycin—10 and 100 mcg. per tablet.
Terramycin—10 and 100 mcg. per tablet.
Erythromycin—1 and 10 mcg. per tablet.

For the purposes of this summary only the relative sensitivity to the higher concentration of the antibiotic has been considered. The tests were read after 18 hours incubation and organisms were considered sensitive if a clear zone of at least 2 mm. diameter was present around the test disc, otherwise the organisms were considered resistant.

The source of the material examined was from general practitioners and hospitals throughout the State in the approximate ratio of 60:40. This sampling would be expected to give results differing from those derived entirely from a hospital population. Thanks are due to Mr. M. W. Randell, who undertook the statistical analysis of the data.

13. Infections due to Mycobacterium Ulcerans

During the year two patients were diagnosed as having skin infections due to *M. ulcerans*. Details of these cases are set out hereunder.

TABLE CIV

Staphylococcus Aureus

Period	Number of Cases	Degree of Sensitivity	Penicillin	Streptomycin	Chloramphenicol	Aureomycin	Terramycin	Erythromycin
1-1-56 to 31-12-57 ..	641	Sensitive ..	299 47%	592 92%	641 100%	625 98%	561 88%	603 94%
		Resistant ..	342 53%	49 8%	Nil ..	16 2%	80 12%	38 6%
1-1-58 to 30-6-59 ..	681	Sensitive ..	271 40%	606 89%	676 99%	652 96%	576 85%	641 94%
		Resistant ..	410 60%	75 11%	5 1%	29 4%	105 15%	40 6%
1-1-56 to 30-6-59 ..	1,322	Sensitive ..	570 43%	1,198 91%	1,317 99·6%	1,277 97%	1,137 86%	1,244 94%
		Resistant ..	752 57%	124 9%	5 0·4%	45 3%	185 14%	78 6%

TABLE CV

Bacterium Coli

Period	Number of Cases	Degree of Sensitivity	Penicillin	Strep-tomycin	Chloram-phenicol	Aureomycin	Terramycin	Ery-thromycin
1-1-56 to 31-12-57	282	Sensitive	4 1%	259 92%	275 98%	251 89%	230 82%	6 2%
		Resistant	278 99%	23 8%	7 2%	31 11%	52 18%	276 98%
1-1-58 to 30-6-59	326	Sensitive	1 0%	293 90%	301 92%	278 85%	259 79%	1 0%
		Resistant	325 99%	33 10%	25 8%	48 15%	67 21%	325 99%
1-1-56 to 30-6-59	608	Sensitive	5 0%	525 91%	576 95%	529 87%	489 80%	7 1%
		Resistant	603 99%	56 9%	32 5%	79 13%	119 20%	601 99%

TABLE CVI

Pseudomonas Pyocaynea

Period	Number of Cases	Degree of Sensitivity	Penicillin	Strep-tomycin	Chloram-phenicol	Aureomycin	Terramycin	Ery-thromycin
1-1-56 to 31-12-57	88	Sensitive	1 1%	77 87·5%	66 75%	34 39%	52 59%	3 3%
		Resistant	87 99%	11 12·5%	22 25%	54 61%	36 41%	85 97%
1-1-58 to 30-6-59	75	Sensitive	Nil 0%	62 83%	31 41%	19 25%	36 48%	3 4%
		Resistant	75 100%	13 17%	44 59%	56 75%	39 52%	72 96%
1-1-56 to 30-6-59	163	Sensitive	1 0%	139 86%	97 60%	53 33%	88 54%	6 4%
		Resistant	162 99%	24 14%	66 40%	110 67%	75 46%	157 96%

TABLE CVII

Proteus Vulgaris

Period	Number of Cases	Degree of Sensitivity	Penicillin	Strep-tomycin	Chloram-phenicol	Aureomycin	Terramycin	Ery-thromycin
1-1-56 to 31-12-57	56	Sensitive	1 2%	39 70%	52 93%	13 23%	5 9%	Nil 0%
		Resistant	55 98%	17 30%	4 7%	43 77%	51 91%	56 100%
1-1-58 to 30-6-59	136	Sensitive	8 6%	108 79%	121 89%	31 23%	26 19%	3 2%
		Resistant	128 94%	28 21%	15 11%	105 77%	110 81%	133 98%
1-1-56 to 30-6-59	192	Sensitive	9 5%	147 76%	173 90%	44 23%	31 16%	3 2%
		Resistant	183 95%	45 24%	19 10%	148 77%	161 84%	189 98%

TABLE CVIII

Streptococcus Viridans

Period	Number of Cases	Degree of Sensitivity	Penicillin	Strep-tomycin	Chloram-phenicol	Aureomycin	Terramycin	Ery-thromycin
1-1-56 to 31-12-57	182	Sensitive	166 91%	180 99%	182 100%	182 100%	181 99·5%	170 93%
		Resistant	16 9%	2 1%	Nil 0%	Nil 0%	1 0·5%	12 7%
1-1-58 to 30-6-59	294	Sensitive	253 86%	286 97%	293 99·5%	292 99·5%	288 98%	283 96%
		Resistant	41 14%	8 3%	1 0·5%	2 0·5%	6 2%	11 4%
1-1-56 to 30-6-59	476	Sensitive	419 88%	466 98%	475 99·5%	474 99·5%	469 99%	453 95%
		Resistant	57 12%	10 2%	1 0·5%	2 0·5%	7 1%	23 5%

TABLE CIX

Streptococcus Haemolyticus

Period	Number of Cases	Degree of Sensitivity	Penicillin	Strep-tomycin	Chloram-phenicol	Aureomycin	Terramycin	Ery-thromycin
1-1-56 to 30-6-59	44	Sensitive	37	43	43	44	44	39
		Resistant	7	1	1	..	..	5

Streptococcus (Non Haemolytic)

Period	Number of Cases	Degree of Sensitivity	Penicillin	Strep-tomycin	Chloram-phenicol	Aureomycin	Terramycin	Ery-thromycin
1-1-56 to 30-6-59	24	Sensitive	15	22	22	23	22	20
		Resistant	9	2	2	1	2	4

Paracolon Bacillus

Period	Number of Cases	Degree of Sensitivity	Penicillin	Strep-tomycin	Chloram-phenicol	Aureomycin	Terramycin	Ery-thromycin
1-1-56 to 30-6-59	12	Sensitive	1	8	12	9	7	2
		Resistant	11	4	0	3	5	10

A white female child, aged 4 years, from the Glasshouse Mountains, North Coast, developed a "boil" on her right arm early in September, 1958. The lesion failed to develop normally and six weeks later was incised without yielding any pus. After this the lesion did not improve but a yellow discharge developed and ulceration developed and spread. In October, 1958, a swab from the wound yielded acid-fast bacilli; *M. ulcerans* was isolated in culture. Typical lesions developed in the foot pad of mice injected with pus obtained from the ulcer in December, 1958, and *M. ulcerans* was isolated subsequently from the excised mouse tissue. The wound was excised and treatment with antituberculous drugs administered. The wound broke down once in January, 1959, but when last examined in July, 1959, the scar was depressed and firm healing had occurred.

A white female, aged 41 years, from Beerwah, North Coast, in September, 1958, developed a small nodule on the dorsal surface of her left wrist. This slowly increased in size and was biopsied. The resultant wound did not heal and by January, 1959, the wound involved an area 2 inches by 3 inches, with a bluish red discolouration of the surrounding skin. A slough was present at the base of the ulcerated area. On January 30th, 1959, innumerable acid-fast bacilli were found in a swab from the ulcer and *M. ulcerans* was isolated. The patient was admitted to hospital for surgical excision and treatment with antituberculous drugs. A full thickness abdominal wall skin graft was necessary but this was successful and the patient was discharged in June, 1959.

As yet we know nothing of the epidemiology of this infection but it is of particular interest that both these patients were from the same area and both developed the lesions at the same time.

14. HISTOPATHOLOGY

Amongst the routine biopsy and post mortem sections examined during the year the following are of interest:—

Cutaneous nocardiosis.

Regional non-bacterial suppurative lymphadenitis ("Cat-scratch disease") (2 cases from Maryborough).

Chromoblastomycosis (1 case).

Sporotrichosis (from Proserpine, Queensland and Lismore, New South Wales).

"Milkers nodule" (4 additional cases).

Wound infection due to *Mycobacterium ulcerans.*

Chronic filariasis in a pelvic lymph node.

Lupus vulgaris.

Sarcoid-like reaction to nylon suture material in the abdominal cavity.

15. PUBLICATIONS

*Sharp, C. F. (1958): "Laboratory Diagnosis of Leptospirosis with the Sensitized Erythrocyte Lysis Test", J. Path. Bact. 2, 349.

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Tonge, J. I. (with Derrick, E. H.), (1959): "A fatal case of 'Q' fever associated with hepatic necrosis", Med. J. Aust., 1959, 1, 594.

Tonge, J. I. (1959): "Brill's Disease (recrudescent epidemic typhus) in Australia", (in the press).

* Previously reported as in the Press.

GOVERNMENT CHEMICAL LABORATORY, 1958–59

Director and Chief Inspector of Explosives S. B. WATKINS, M.Sc., (F.R.A.C.I.)

Deputy Director and Inspector of Explosives: A. S. HURWOOD, B.Sc., F.R.A.C.I., A.R.I.C.

The Government Chemical Laboratory had its beginning in 1882 as the result of legislation introduced the previous year, providing for the sale of foods and drugs in a pure state. The Governor in Council was given power to appoint some person (or persons) possessing competent knowledge, skill and experience as Government Analyst(s) or Analyst(s) for the purposes of the Act. British law in this regard had only preceded this State law by six years when the law relating to "unsound food" in the " Public Health Act, 1875," and to "foods and drugs" in "The Sale of Foods and Drugs Act, 1875" was passed.

Although the purpose of the legislation was to assure pure foods and drugs, the services of the Government Analyst were immediately sought in other directions, resulting in a gradual expansion to provide a chemical service which today embraces a majority of Government Departments.

In keeping with the purpose of the laboratory, much of the work is of a routine nature concerned with the maintenance of standards set by law, government specifications and with the terms of contract for the supply of goods for use in Government activities. These routines are those established by common practice, in some cases based upon quite unscientific premises, such a one being the conception of proof spirit, about which much confusion exists in the public mind, in believing that proof spirit is the measure of the percentage of alcohol. However, what is routine today was the subject of quite a lot of precise research before it became routine, and even today, routine methods are still investigated, altered, modified or even discarded as better methods of evaluation arise. It is not correct to assume that routine methods are simply rule of thumb operations only to be handled by manipulative skill. This may apply to production control or repetitive determinations in technical routine but not to the work of the Government Chemical Laboratory, where in so many cases the Chemist has to uphold his findings or may be called upon to substantiate these in a Court of law or where these findings are the basis of a court action. Apart from the regular work referred to above and its importance, a significant part of the work of the laboratory involves the unravelling of the complexities associated with present day foods and food manufacture, with technical products or basic substances used in this field, with economic minerals, complex ores and processes associated with the State's development, with the increasing array of textiles, and the involved nature of the numerous nostrums and patent medicines. Modern therapeutic substances require a great deal of experience and skill in their evaluation and the isolation of poisons from biological matter is a study in itself. A great deal of work is conducted on determinations of low levels of lead in biological fluids and bones using involved techniques, and of arsenic in like fluids, hair and nails, and of alcohol in specimens of blood and urine. Manufacturing processes bring with them problems of the disposal of wastes, particularly of high volumes of waste water, whose polluting effects are all to common and require solution.

The sectional reports herewith prepared by the Officers-in-Charge disclose in detail the multiplicity of work covered in the above summary. Their duties included along with important investigations the supervision of staff and staff work, and the holding of consultations with interested parties on their problems. The sectional staffs include officers of considerable experience and their training has been the responsibility of senior personnel, whose places they will ultimately take. Staffing problems have been difficult over the past years, but it is gratifying to report that at the present time, the staff position is in a satisfactory state, thanks to the stabilising effect of improved status, and emoluments, and the prospective benefits of superannuation.

The year has been one of more than ordinary importance in the development of the laboratory for the following reasons:—

(1). A modern Avery Textile Testing Machine is awaiting installation in a room air conditioned to the standards laid down for textile testing. With its attached automatic drum recorder, the machine will trace the progress of the test on a chart which can be preserved for future reference. It will replace the present Avery machine, which has given service over the past 30 years. Registration of the machine with the National Association of Testing Authorities will be sought in due course.

(2). A spectrophotometer covering the ultra violet and visible spectrum has been purchased. This equipment is a necessity in any laboratory engaged upon the type and amount of work referred to above. The formulation of foods, drugs, fuels, oils, pharmaceutical, and therapeutic substances in so many instances includes "additives" for this and that—food colours, synthetic flavourings, vitamins, hormones, antioxidants, anticorrosives, antiknock compounds, detergents, &c. The determination of such additives often at very low concentrations requires a new approach to analytical procedure and instrumentation is the answer. I look forward to further developments in this direction, and appreciate the encouragement so far given to improving the laboratory equipment.

(3). A laboratory in the Health and Home Affairs building, Colchester Street, South Brisbane, equipped for undertaking the investigational work concerned with the Air Pollution Survey was opened by the Honourable the Minister for Health and Home Affairs. In the interests of public health, pure air is just as important as pure food and water, and in this laboratory, evaluations are being conducted to determine the degree of purity of air in Brisbane and Ipswich. The findings are being reported to the Air Pollution Survey Committee. A detailed account of the work done in the laboratory on samples collected at the stations in Brisbane and Ipswich is given in a report under section 2.

(4). A further laboratory was furnished at Colchester Street for undertaking water analysis. Here three officers are engaged in this work, and this has eased to a certain extent the problem of accommodation at the head laboratory. However, as appears later in the Report under section 3, this section is very congested and the conditions under which coal washabality tests for the Queensland Coal Board are carried out leave much to be desired. In this work, corrosive solutions of zinc chloride at various densities are used for float and sink tests on prepared samples of coal, the operations being carried out on the river bank under a roof with full exposure to wind and rain. It is hoped that more congenial conditions will be found in the near future.

(5). But for the year 1952-53, when the all-time record to date of 26,091 samples were augmented by 10,957 samples of tobacco leaf in a State-wide survey, the number of samples for the year totalled 23,157, the second highest on record, without any untoward occurrences to boost this aggregate.

(6). A start was made to paint the laboratory in tasteful colours. That part of the work completed during the year under review is a great improvement on the previous drab three-colour scheme.

During the year, the designation of the Government Analyst and Chief Inspector of Explosives was changed to Director of the Government Chemical Laboratory and Chief Inspector of Explosives, and that of the Deputy Government Analyst and Inspector of Explosives to Deputy Director, Government Chemical Laboratory and Inspector of Explosives. Three Chief Chemists were appointed, each in charge of a section, also four Senior Chemists, one being attached to each of the four sections.

Table CX covers the total samples examined against the corresponding year for the past ten years:—

Year	Total Samples
1949–50	18,840
1950–51	14,137
1951–52	15,657
1952–53	26,091 (Record Year)
1953–54	21,894
1954–55	20,905
1955–56	21,178
1956–57	19,927
1957–58	21,806
1958–59	23,157

The distribution of the total among the various sections for this and the four previous years is shown in Table CX:—

TABLE CX (*a*)

Year	Section 1	Section 2	Section 3	Section 4
1954–55	7,397	2,815	4,412	6,281
1955–56	6,690	3,207	3,754	7,527
1956–57	6,731	3,686	4,473	5,037
1957–58	8,269	3,887	4,620	5,030
1958–59	8,087	2,830	5,994	6,246

The number of samples submitted by the various Government Departments, Hospital Boards, Medical Profession and the Public is indicated in Table CXI.

TABLE CXI

State Departments—	
Health and Home Affairs	7,660
Police	367
Mines	14
Coal Board	373
Portmaster	3,055
Geological Survey	1,576
Tile Testing Station	261
Irrigation	1,223
Local Government	194
Harbours and Marine	212
Main Roads	152
State Stores	700
Public Works	1,157
Housing Commission	549
Railways	75
Others	953
Commonwealth Departments—	
Customs	2,289
Commerce	1,214
Others	192
Hospital Boards	464
Medical Profession	101
Public	376
Total	23,157

SECTION 1

FOODS, DRUGS AND WATERS

A. S. HURWOOD, B.Sc., F.R.A.C.I., A.R.I.C.,
Deputy Director—Officer-in-Charge

Table CXII. gives the number and source of the samples examined.

TABLE CXII

Department	No. of Samples
Health and Home Affairs	5,939
Irrigation and Water Supply	1,223
Local Government	32
Other Government Departments	723
Public	170
Total	8,087

TABLE CXIII

SUMMARY OF SAMPLES OF FOODS AND DRUGS EXAMINED FOR THE DEPARTMENT OF HEALTH AND HOME AFFAIRS

Nature of Sample	No. of Samples
Beverage or Cordial	749
Bread	327
Cereal	117
Condiment	75
Confectionery	30
Crayon or Colour Pencil	289
Disinfectant	26
Drug or Medicine	201
Fish	30
Fruit or fruit juice	69
Jam or jelly	114
Meat	155
Milk—official	2,719
Milk—unofficial	107
Milk product	63
Paint or Paint Scraping	158
Spirituous Liquor	20
Tobacco	106
Toy	56
Vegetable	33
*Miscellaneous	298
Total	5,742

*The miscellaneous samples include meat pie, mushroom, beer glass, preserving liquor, potato chip, drinking straw, fireworks, soil, peanut and hydrometer.

TABLE CXIV

Details of Legal Samples Taken by Inspectors in Accordance with the Provisions of "The Health Acts, 1937 to 1955"

Nature of Sample	Number Examined	Passed	Failed
Milk	2,719	2,562	157
Minced Meat	82	34	48
Paint scraping	46	8	38
Sausage	37	20	17
Toy	19	3	16
Spirituous Liquor	5	..	5
Paint	3	..	3
Dangerous Drug	2	..	2
*Miscellaneous	5	4	1
Total	2,918	2,631	287

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* The miscellaneous samples include lemonade, oysters (2), waste beer and bread.

TABLE CXV

Details of Legal Samples of Milk Submitted for Analysis

District	Total Number of Samples	Number of Samples which Passed the Standard	Number of Watered Samples	Number of Samples below the Standard in Fat (3·3 per cent.) but not Watered	Number of Samples below the Standard in Total Solids (12 per cent.) and/or Solids not Fat (8·5 per cent.) but not Watered nor Deficient in Fat	Proportion of Watered Samples (per cent.)	Average Proportion of Added Water (per cent.)
Greater Brisbane	1,664	1,630	9	20	5	0·5	16·0
Cairns	108	77	15	11	5	13·9	2·8
Ipswich	225	206	..	18	1	Nil	Nil
Mackay	11	11	..	..	..	Nil	Nil
Mount Isa ..	27	21	5	..	1	18·5	9·0
North Coast ..	126	115	1	7	3	0·8	5·0
Rockhampton ..	42	37	..	4	1	Nil	Nil
South Coast ..	161	158	..	3	..	Nil	Nil
Toowoomba ..	82	73	2	3	4	2·4	23·5
Townsville ..	98	79	7	10	2	7·2	12·7
Western Towns ..	63	48	1	8	6	1·6	15·0
Wide Bay ..	112	107	..	4	1	Nil	Nil
Total ..	2,719	2,562	40	88	29	1·4	9·6

Summary of Table CXV

	Proportion of Total Number of Samples Per Cent.
Samples adulterated with water ..	1·4
Samples deficient in fat but not watered	3·3
Samples below the standard in total solids and/or solids not fat only ..	1·0
Samples which passed the standard ..	94·3
Total	100·0

TABLE CXVI

Milk Samples Taken in Greater Brisbane Compared with Previous Years

Year	Number of Samples	Proportion of Total Samples	Proportion Adulterated with Water
		Per cent.	Per cent.
1951–52	878	41·8	4·3
1952–53	813	42·1	0·7
1953–54	768	37·7	7·7
1954–55	898	51·3	0·9
1955–56	679	41·9	0·9
1956–57	730	46·7	1·9
1957–58	1,305	53·1	0·6
1958–59	1,664	61·2	0·5

TABLE CXVII

Showing Milk Analyses Compared with Previous Years

Year	Number of Legal Samples	Percentage showing Deficiency in Fat but not Watered	Percentage Below the Standard in Total Solids and/or Solids not Fat only	Percentage of Watered Samples	Added Water (Average per cent.)
1951–52	2,100	13·7	9·6	8·0	9·5
1952–53	1,934	7·8	3·5	2·8	10·2
1953–54	2,036	11·0	7·5	6·3	9·4
1954–55	1,750	6·4	3·0	3·5	10·2
1955–56	1,621	5·4	1·1	3·7	9·2
1956–57	1,562	6·4	2·8	3·7	7·5
1957–58	2,459	5·3	3·0	2·2	8·9
1958–59	2,719	3·3	1·0	1·4	9·6

MILK

Bottled pasteurised milk, including school milk under the free milk scheme, was regularly examined with satisfactory results.

The number of legal samples submitted was 2,719, the largest yearly total for eighteen years.

A good milk season was reflected in the overall high quality of the milk examined. The number of naturally poor milks was at an all-time record low level and the number deficient in fat was the lowest for ten years. The average fat content was at the exceptionally high level of 4·03 per cent. These results indicate that the stock in general was in a well fed and healthy state. Adulteration with water was also at the lowest level on record. Cairns, Townsville, and Mt. Isa showed the highest incidence in watered milks, although the Cairns milks showed low-level adulteration only, due possibly to a few dishonest dealers feeding the pooled milk at the pasteurisation centres. Few samples were submitted from the Mackay district.

The ten flavoured milks and sixteen cream samples examined conformed with their respective standards.

MEAT

Many butchers again were at fault in the use of the preservative, sulphur dioxide. Of 82 legal samples of minced meat examined, 48 samples contained this preservative in contravention of the regulations, and of 37 legal samples of sausages, 17 samples contained more sulphur dioxide than the maximum proportion permitted, namely 3·5 grains to the pound.

Sausages were also examined for meat, starch, and fat content with satisfactory results.

An uncooked mutton chop was luminous in the dark, due to the presence of harmless luminous micro organisms. It was the second submission of its kind in ten years, and a type of contamination that is not common.

FLOUR

White flours for bread making and for cake making, protein rich flours, wheatmeal flours and wholemeal flour mixtures to a total number of 100 samples were examined. These represented the products of the several flour mills of Queensland, and in general they conformed with requirements, although a few protein rich flours were deficient in nitrogen content and some of the wholemeal flour mixtures deficient in wholemeal content. Following a good wheat season, most of the flour used for breadmaking was milled from Queensland wheat. Its average baking quality was exceptionally good and second to none in Australia. The ordinary white flours average 12 per cent. protein, with the minimum at 11·5 per cent., and the maximum at 13 per cent. The protein rich flour, milled from specially selected wheats from special districts easily attained the prescribed minimum protein content of 15·4 per cent. on a dry basis.

BREAD

Bread surveys were carried out in sixteen towns, including Cairns, Coolangatta, Ipswich, Toowoomba, Townsville, Southport, and Warwick, and the overall proportion of good quality bread was at a high level.

A few complaint samples were received from the Army, the Brisbane Hospital, and the public.

Several sultana loaves were deficient in fruit content.

Sixty-nine sample loaves of bread were received from the Weights and Measures Department for determination of dry solids content in connection with the new legislation controlling bread weight on a dry solids basis. There is no doubt that this legislation has resulted in an improvement in the quality of Queensland bread. Provided the dough weights are correct, the baker can now properly bake the loaf without any concern as to prosecution for short weight bread. There is now no excuse whatever for the underbaked loaf.

In this most important section of the work, 327 samples of bread were examined.

ANILINE MARKING INK

A number of laundry marking inks was examined in connection with cases of suspected aniline poisoning at the Brisbane General Hospital. One of the samples contained 60 per cent. free aniline. Aniline marking inks are the most popular, and at the same time, the most toxic of the common laundry marking inks, and care must be exercised in their use. There is no health risk involved, even with babies, if the clothes are marked lightly with the ink and the marked fabric thoroughly washed prior to use.

JAM SURVEY

In the most extensive post-war survey of jams as sold in Queensland, 88 samples were examined.

The 11 samples of marmalade conformed with requirements, as also did the 9 samples of fruit jelly apart from the presence of artificial colouring in 2 of the latter samples.

Of the 68 samples of jam, 17 were slightly deficient in fruit content, 1 was deficient in soluble solids and 4 contained artificial colour, in contravention of the regulations.

None of the samples contained added glucose and none contained more than the permitted proportion of added pectin.

Most of the samples were of fair average quality.

THE SEARCH FOR LEAD

Queensland is lead conscious and it is doubtful if any country in the world has more severe restrictions against the use of this toxic metal and its compounds. Under Queensland legislation, it is enacted that toys must be free of lead, that roofing paint must be free of lead, that indoor paint must be free of lead, and that outdoor paint for use up to the reach of a child must be free of lead, and that no paint shall contain white lead.

Further, chalks, pencils, crayons, and school pastels must be free of lead.

Furthermore, there is the prohibition of lead in all food containers from cooking utensils to drinking cups, and finally the drastic limitation of lead in all foodstuffs.

These regulations are actively policed and 510 samples in all of paints, paint scrapings, crayons, pencils, food containers and foodstuffs were submitted for examination as to lead content.

FRUITS AND VEGETABLES

TABLE CXVIII

Fruit or Vegetable	Found	Passed or Failed
Apples	Arsenic (As_2O_3) 2.5 to 3·5 p.p.m.	Failed
Apples	Arsenic (As_2O_3) 3·5 p.p.m. D.D.T. 9 p.p.m.	Failed
Apples	Arsenic (As_2O_3) 0 to 0·2 p.p.m.	Passed
Apple	D.D.T. 1 p.p.m.	Passed
Apple	Spray residue—nil	Passed
Apple	Parathion—nil	Passed
Apple	Contaminated with diphenyl	Failed
Cabbage	Heavy residues of D.D.T. and copper compounds	Failed
Carrots	No abnormal feature	Passed
Grapes	Copper oxychloride in quantity	Failed
Oranges	Yellow oil soluble coal tar dye in skin	Failed
Plum	Trithion	Failed
Potatoes	Gammexane—nil	Passed

Table CXVIII lists the complaint samples of fruits and vegetables examined and the results obtained thereon.

POISONING RISK IN THE HOME

Poisoning of young children in the home by consumption of toxic household preparations is all too common and there has recently been an increased number of urgent enquiries from doctors concerning the composition of the preparations involved. More often than not, the desired information is readily available, but at times there is a loss of valuable time in obtaining it.

Consideration must soon be given to the compulsory declaration in the label of any preparation intended for home use, not only of scheduled poisons, but also of all potent ingredients likely to have an ill effect on a child, if swallowed.

TOBACCO

Prepared tobacco samples to a total number of 106 were examined.

Contraband cigarettes, cigars and pipe tobacco from the Queen's Warehouse were examined for quality and suitability for sale.

Tender samples of fine-cut and pipe tobacco for use in Government Institutions were examined for the State Storekeeper, who was advised of their comparative values.

No significant proportion of lead arsenate or other insecticidal spray residue was found in any of the tobacco samples examined.

MERCURY IN GINGER

Most of this year's ginger crop was grown from seed pieces treated with mercurial fungicides and samples of the freshly harvested plants were examined for mercury content, both as to amount and location in the rhizome. The ginger plant consists of the seed piece, the neck or primary growth from the seed piece and the new rhizome which grows from the neck and constitutes about four-fifths of the weight of the plant as harvested.

Mercury was present in the outer tissues and skin (1/32 in. section) of the seed piece at the rate of 2·5 p.p.m. and at double this rate in the tissues adjacent to the cut surface of the seed piece. In the section of the seed piece lying between 1/32 in. and 1/16 in. of the skin, mercury was present at the rate of 0·5 p.p.m. In portions of the seed piece below 1/16 in. of the skin, no mercury was detected.

In an overall sample of the neck of the plant, mercury was present at the rate of 0·05 p.p.m. and was probably due to contamination from the surrounding soil. The mercury content of the new rhizome was less than 0·01 p.p.m. Tests to date would indicate that a considerable proportion of the mercury can be removed from the skin by washing. This work has demonstrated that the "seed" free portion of the ginger rhizomes, including the neck or stem, is for all practical purposes free of mercury and fit for human consumption, and also that the "seed" portion still retains a small but significant proportion of mercury. This "seed" portion should be bagged separately on harvesting and either discarded or used again as planting stock.

MODEL AIRCRAFT FUEL

In a survey of the model aircraft fuels on the market, 11 brands were submitted for examination.

Six samples of diesel motor fuel were composed basically of equal volumes of ether, kerosene and a lubricating oil, either mineral oil, castor oil, or a mixture of both. Additional components up to 2 per cent. found in some of the fuels were amyl nitrite, higher alcohols and nitrobenzene. The other 5 samples were of the "gloplug" motor fuel type and consisted of varying proportions of methyl alcohol, benzene, acetone and castor oil with three of the samples containing also ethyl alcohol and nitrobenzene.

All samples came within the scope of the Poisons Regulations. Those containing nitrobenzene which remains in the non-volatile residue constitute the most serious hazard. The inflammability of these fuels, particularly those containing ether, is another danger in their handling and use.

SOFT DRINKS

An all time record number of 749 samples of soft drinks was examined, this being more than 500 samples in excess of the average yearly total of recent times. The submissions came from thirty-five towns including Cairns, Babinda, Gympie, Caloundra, Redcliffe, Roma, Rockhampton, Barcaldine, and Thursday Island. The actual variety of drinks was not great consisting chiefly of lemonade, ginger ale, creaming soda, sarsaparilla, orange drink or flavoured drink, lemon drink or flavoured drink, passion fruit drink, Kola, lime flavour, and soda and the synthetic flavoured drink known as "Cheery Cheer."

Few, unfortunately, contained any fruit juice.

Most of the samples conformed with official requirements. Some were labelled incorrectly, others contained excess preservative, and a small number contained synthetic sweetening substance in contravention of the Regulations.

These drinks are consumed in enormous quantity by children, and their intensive sampling is fully justified since the highest possible standard must be maintained.

TABLE CXIX

Composition of Some Genuine Fruit Pulps Examined

Number Fruit	1 Strawberry	2 Gooseberry	3 Pineapple	4 Banana (Cavendish)	5 Mango (Common)
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Total Solids	11·0	18·2	13·9	22·6	16·5
Insoluble Solids	1·7	5·9	1·3	2·1	1·2
Ash	0·56	1·01	0·28	0·80	0·41
Phosphate (P_2O_5)	0·076	0·127	0·012	0·052	0·024
Acidity as Citric Acid	1·4	1·8	1·4	0·8	0·3

Drugs and Medicines

Under this heading, 201 samples in all were examined. The work followed the same pattern as in previous years. Drugs were checked for purity against official standards, and the composition and claims of new proprietary lines examined. Medicines were checked for accuracy in dispensing and complaint samples from the public investigated.

In a survey of headache powders and tablets, most of the samples obtained conformed with requirements. However, in one brand the variation in weight of the individual powders was excessive; in another the declared composition was not accurate enough; and in a third the composition was not declared in the label as required.

A check on accuracy in dispensing was carried out. A potassium bromide and chloral mixture was correctly dispensed at five pharmacies, and was 5 per cent. low in bromide content at a sixth.

With a 5 per cent. salicylic acid ointment, four pharmacies were reasonably correct, while two others showed a 14 per cent. deficiency in salicylic acid content.

Satisfactory results were obtained from six pharmacies with an alkalising mixture of equal parts of sodium bicarbonate, bismuth carbonate, calcium carbonate and magnesium carbonate. In no case was the dispensing error on any of the ingredients greater than 5 per cent.

Ampoules of morphine sulphate and of pethidine hydrochloride and tablets of morphine sulphate were examined in connection with two cases of suspected malpractice in dealing with the drugs.

Deteriorated dangerous drugs from certain pharmacies were checked for identification and quantity and then destroyed.

TABLE CXX

Composition of Some Popular Preparations Containing Meat Extract, Obtained from the Local Market

Sample Number	1	2	3
	Per Cent.	Per Cent.	Per Cent.
Water	54·2	41·3	33·4
Ash	19·0	16·1	21·2
Common salt	15·8	10·9	4·5
Phosphate (P_2O_5)	1·04	1·86	5·96
Fat	0·1	0·2	Trace
Starch	2·9	2·7	Nil
Total Nitrogen	3·26	6·10	7·88
Protein (N. x 6·25)	20·7	38·1	49·2
Organic matter soluble in 80 per cent. alcohol	25·4	26·9	41·8
Organic matter insoluble in 80 per cent. alcohol	1·4	15·7	3·6
Creatin and Creatinine	0·6	1·4	6·2

Sample Numbers 1 and 2 were preparations of yeast extract, meat extract, salt and starch containing approximately 10 per cent. and 25 per cent. meat extract respectively.

Sample Number 3 was a genuine meat extract.

Survey Samples of Foods and Drugs

Routine surveys were made on a number of foods and drugs, including olive oil (13), tomato sauce (15), margarine (6), headache powders and tablets (22), butter (8), chocolates (10), canned peas (11), dried peas (5), canned fruit (15), honey (11), and coffee and chicory extracts (5) and most of the samples conformed with prescribed standards.

Work for Miscellaneous Government Departments

A large volume of work was again carried out for Government Departments other than the Department of Health and Home Affairs. Tender and contract samples of foodstuffs were examined for the Departments of the Army, Air Force, and Repatriation; sausage meat was examined for the Prices Commissioner; loaves of bread for the Weights and Measures Department and drugs for certain hospitals. Honey and ginger were examined for the Department of Agriculture and drugs and foodstuff for the Department of Health, Port Moresby.

The Railway Commissioner submitted some samples for goods classification purposes and others in connection with claims made on the Department. Drinking straws for the free milk scheme were examined for the Education Department and there were other submissions from the Government Storekeeper, the Housing Commissioner and the Harbours and Marine Department.

MISCELLANEOUS

Three varieties of mangoes, namely "Bullock's Heart," "Kensington Pride," and the common mango, yielded Vitamin C at the rates of 7, 15, and 47 mgm. per 100 gm. respectively.

The kerosene content of a soap labelled and sold as Kerosene Soap was 0·2 per cent.—certainly insufficient to justify the description.

Samples of water from Breakfast Creek were examined in connection with the cause of death of a large number of fish.

Edible fats and oils were examined for anti-oxidants and the results obtained would indicate that they are not used to any great extent in fatty foodstuffs, in Queensland, at the present time.

Chromatographic methods for the separation and identification of artificial dyestuffs in foods, found increasing use.

The position as regards the adulteration of spirituous liquors was satisfactory, and only five samples in all of whisky, brandy, rum, and gin contained excess water.

One sample of honey was adulterated with 35 per cent. cane sugar.

Strychnine was present in two specimens of dog bait, and five other suspected baits were free of poison.

The cause of obliteration of print in the labelling of certain butter wrappers was determined.

Sikes hydrometers, for use by Health Inspectors in determining the strength of spirituous liquors at hotels, were checked for accuracy.

Dyeline prints in the form of old maps were examined as for suitability for use as drawing paper for young children.

A number of samples of fireworks contained arsenic in contravention of the Regulations.

Paraffin wax was not detected in ten samples of chocolate confections examined.

Lead was found present in quantity in the coloured portions of five imported china cups and saucers and one china mug.

A hair dye and a dandruff preparation were condemned as unfit for use because of the presence of lead compounds.

Fungicidal preparations of the highly toxic substances, pentachlorphenol and phenylmercuric acetate were examined, and found to be not packed or labelled in accordance with the Poisons Regulations.

Samples of suspected ambergris were not genuine.

The number of complaint samples of contaminated foodstuff was not large and was confined chiefly to samples of bread, milk and fruit.

A sample of imported whisky gave evidence of artificial "beading."

Samples of potatoes and fish contained mercury at the rate of 0·1 p.p.m. and other foods, including milk, oysters and ginger contained this trace element at a rate of less than 0·01 p.p.m.

"The Poisons Regulations of 1958" came into operation on the 11th September, 1958, repealing "The Poisons Regulations of 1947."

Finally, a considerable volume of work on foods and drugs, of a consultative and advisory nature, was carried out for Government Departments and for the public.

WATERS

The number of samples of water and sewage (including trade wastes) analysed during the year was 2,117. These were submitted by various Government Departments (State and Commonwealth) and the public, as shown by Table CXXI.

TABLE CXXI

Water Samples Submitted by—	Number of Samples
Department of Health and Home Affairs	197
Department of Irrigation and Water Supply	1,223
Department of Local Government ..	32
Department of Harbours and Marine ..	212
Miscellaneous Government Departments	74
Public	165
Sewage samples submitted by State Departments	162
Commonwealth Departments	52
Total	2,117

The number of samples analysed during the year fell below the previous year's record total of 2,411 by nearly 300, but reference to numbers only of samples does not give a true indication of the amount of work carried out by the section. The samples submitted by the Local Government Department and the Department of Harbours and Marine, which required an average of two determinations per sample, together showed a decrease of 429 below the previous year's total, but the number of samples analysed for the Irrigation and Water Supply Commission and the Department of Health and Home Affairs increased by 228, and each of these samples required at least nine determinations per sample. The increase in the analyses carried out for the Irrigation Department, which is at present making a State-wide stream survey, necessitated the appointment last July of a fourth analyst to the Water Section.

The decrease in the number of samples submitted by the public is no doubt due mainly to a more even distribution of rainfall during the year. In drought periods, normal domestic water supplies fail in many instances, and alternative sources are then sought, resulting in the submission of numerous samples to the Government Analyst.

As is the case every year, several samples from domestic rain water tanks were analysed following a complaint in each case that the water was causing "sickness" to a varying degree in individuals and families. In most cases, zinc dissolved from the roof and/or galvanised iron tank was found to be present in the sample in amounts ranging from 6 parts to 15 parts per million. The American Public Health Association standard for zinc in potable water is stated to be "not more than 15 parts per million," but from local experience, this figure appears to be too great for Queensland conditions, where human water consumption is high for most of the year.

Recommendations as to the suitability or otherwise of tank water for human consumption are now made on this assumption.

Rain water collected from fibro-cement roofs is less corrosive, and therefore contains less zinc in solution, than water collected from galvanised iron roofing.

SECTION 2

TOXICOLOGY, BIOCHEMISTRY, INDUSTRIAL HYGIENE AND AIR POLLUTION

I. L. B. HENDERSON, B.Sc., Officer-in-Charge

The total number of specimens submitted for examination by this Section was 2,830.

POLICE DEPARTMENT

Specimens submitted by this Department during the year numbered 367, of which 277 were in connection with 114 post-mortem examinations.

Poisons found included barbiturate (54), strychnine (7), arsenic (4), creosol (3), chloral (2), paraldehyde (1), organic phosphate (1), fluoride (1), phenergan (1), D.D.T. (1), alcohol (1), methyl salicylate (1), and QES tablets (1).

The remaining 36 examinations did not disclose any poison.

It is of interest to note that while the incidence of poisoning by arsenic and strychnine has remained fairly constant over the years, that of barbiturate poisoning has increased greatly, there being 5 deaths from these drugs in 1947-48, as compared with the 54 deaths quoted above.

In addition to these fatal cases, many clinical specimens were received from patients admitted to hospital suffering from barbiturate overdose.

A number of suspected animal poisonings was also investigated.

Miscellaneous specimens examined for this Department included bloods, urines, foodstuffs, anaesthetics, drugs, plant material, soil, and fire residues.

BIOCHEMISTRY

Biochemical specimens are examined for the Laboratory of Micro-Biology and Pathology, the Government Medical Officers, the Director of Industrial Medicine, the Brisbane and South Brisbane Hospitals, other hospitals and sundry medical practitioners.

The nature, significance and number of such specimens are shown in the following table:—

TABLE CXXII

Nature of Specimen and Significance	*Number of Specimens*
Blood and urine, for alcohol or other drugs	994
Blood for bromide	129
Blood for carbon monoxide	14
Bone for lead	61
Urine for lead	861
Urine for mercury	5
Hair, nail and urine for arsenic	86
Miscellaneous	189
Total	2,339

A number of the determinations of lead in urine was carried out on behalf of the Medical Professorial Unit at the Brisbane General Hospital in connection with the use of calcium versenate in the diagnosis of nephritis due to childhood plumbism. A paper on this subject is to be published.

The bromide in blood determinations were by arrangement with the Director of Industrial Medicine in connection with the fumigation with methyl bromide of some thousands of Housing Commission homes. Personnel engaged in the actual fumigation with this poisonous gas were checked regularly as a precautionary measure. A method using the Conway micro-diffusion apparatus was found to be satisfactory for the low concentrations involved.

INDUSTRIAL HYGIENE

Excluding biochemical specimens, the number of samples examined was 124.

Investigations undertaken during the year for the Director of Industrial Medicine and the Health Inspectorial Section included:—

Ventilation tests in city cafes and hotel kitchens, smelters handling lead and lead products, and a city newspaper office.

Dust surveys at a quarry, a Gas Company retort house, a pig experimental station and a Mineral sands treatment plant.

Sulphur dioxide tests at a fellmongery.

Numerous tests on respirator canisters for the company fumigating Housing Commission houses with Methyl Bromide. These tests resulted in radical changes in the respirators used by the men.

Carbon Monoxide tests in the hold of a ship, at a motor car assembly plant and a suburban picture theatre.

AIR POLLUTION SURVEY

Since the beginning of March, a survey of Air Pollution in Brisbane and Ipswich has been under way. The chief work is associated with the determinations of deposited pollution and smoke.

Deposited Pollution

For the measurement of deposited pollution, a series of deposit gauges have been sited at various points through the city to form a grid of stations each two miles apart. The co-operation of a number of public bodies, associations and private individuals has been necessary for the housing of the gauges and to these appreciation is expressed.

The deposit gauge consists of a gallon glass bottle with a six-inch glass funnel in the top. Any material which falls (including rain) is collected.

The gauges are changed once a month on the first working day of the month, and the gauge and contents brought to the laboratory for analysis.

The scheme of analysis follows overseas practice and is as follows:—

The funnel and bottle of the gauge are cleaned and washed with distilled water and the whole of the contents evaporated and weighed (Total Solids). The deposit is then extracted with water and filtered—the filtered deposit is weighed (Insoluble Solids). The material is then ashed to give ash and combustible matter (which is that portion destroyed during ashing). Originally, it was planned to include an analysis for tar, but so little was obtained in March and April that this has been abandoned.

Smoke

Since 4th June, five smoke stations have been in operation around Brisbane. They are changed manually once every twenty-four hours, and each station has been operating right through the week and week-end. No information is at present available as to the amount of smoke present in the atmosphere, but variations with weather conditions and time of the week can clearly be seen.

Towards the end of April, the Air Pollution Section moved into the new laboratory in South Brisbane, and this has considerably improved the ease of working.

SECTION 3

MINES, MINERALOGY, METALLURGY AND EXPLOSIVES

V. R. CUNDITH, B.Sc., A.R.A.C.I.,
Officer-in-Charge

Table CXXIII. shows the sources of work done by this section, and the number of each to account for the total of 5,994 samples.

TABLE CXXIII

Department	Number of Samples
Geological Survey and Mines Department	1,590
Coal Board	373
Portmaster	3,055
Other Departments (including 261 tiles)	737
Public	156
Commonwealth Departments	83
Total	5,994

MINES DEPARTMENT AND GEOLOGICAL SURVEY

The types of samples from these departments generally conform with those of previous years. These types include ores for the determination of gold, silver, copper, lead, zinc, antimony, tin, cobalt, nickel and tungsten, together with supplementary work involved with cyanidation and amalgamation.

Clays, House Bricks

Tests were made on clays to determine their suitability for brick and pottery manufacture and refractories.

The greenish yellow to rusty colour which mars building bricks sometimes presents a problem to the householder. The staining is due to vanadium salts which form in the brick during the firing process. When wetted surfaces dry out, the efflorescence of soluble vanadate develops the colours.

This trouble may be prevented by the addition of about 2 per cent. calcium carbonate to the clay prior to manufacture of the bricks.

Ores

Of interest is the receipt of several samples of Beryllium ore with BeO contents 11–14 per cent.

Beryllium—

A sample of such ore yielded—	Per Cent.
Silica (SiO_2)	54·9
Iron Oxide (Fe_2O_3)	2·6
Aluminium Oxide (Al_2O_3)	17·7
Beryllium Oxide (BeO)	13·1
Lime (CaO)	0·0
Magnesia (MgO)	0·9
Potassium Oxide (K_2O)	3·9
Combined Water	5·2
Hygroscopic Water	0·2

The mineral appears to be similar to pseudo smaragd.

Manganese—

Among the 25 Manganese ores analysed may be mentioned—

		Per Cent.
(*a*)	Silica (SiO_2)	1·9
	Manganese (Mn)	54·1
	Manganese Dioxide (by available oxygen)	78·5
(*b*)	Manganese (Mn)	48·8
	Cobalt (Co)	0·6
(*c*)	Silica (SiO_2)	4·4
	Manganese (Mn)	51·8
	Ferric Oxide (Fe_2O_3)	2·3
	Phosphorus (P)	0·1
	Barium Oxide (BaO)	4·7

Fluor Spar

The fluor spar content of some samples received ranged from 8·9 to 53·8 per cent., quartz being the gangue, together with some wolfram in one sample.

Cobalt

A number of samples was received. The majority contained less than 1 per cent. cobalt.

One sample yielded—

Cobalt 3·4 per cent.
Nickel 3·4 per cent.

Gases

Samples of mine air, bore gases, bituminous material, muds, sludges and waters were received in connection with "search for oil" projects.

In some cases, the play of colours and scum on the surface of some samples of water were found to be due to oxidation products of iron compounds.

Visits were also made to collieries in connection with check tests for carbon monoxide, sulphuretted hydrogen, carbon dioxide and oxygen.

Coal and Coke

The activities of the Coal Board (373 samples) and Geological Survey (1,201 samples) have led to continued pressure of analytical work in this important sphere of coal investigation.

In order to expedite the washability tests, two (2) men were appointed temporarily during the January-mid March period. This help was much appreciated. Washability tests take up a lot of time, and are used to determine amenability of the coal to beneficiation by washing plant treatment.

Tests carried out included calorific values, proximate analyses, sulphur determinations, fusion point and analyses of ash, coking tests, ultimate-analyses, shatter tests, washability tests and specific gravity.

Shatter Test

The shatter test is mostly used for measuring the strength or "hardness" of coke, that is, its ability to stand up to the handling involved during transport. It is also of value in selecting cokes for specific purposes.

In this test, 50 lb. sample of lump coke over 2 inches in size is dropped four (4) times from a height of 6 feet on to a cast iron or steel plate and the amount of breakage is measured by sieving the coke.

A good metallurgical coke should show—

75 per cent. over 2 inches.
85 per cent. over 1½ inches.
Less than 3 per cent. below ½-inch size.

Efflorescences from Coal Mines

These are chemical compounds which are formed by oxidation of pyrites and marcasite in coal, coaly shale, coaly sandstone, pyritic shales or sandstone above or below the seam. With the advent of air and water, the breakdown of these minerals yield soluble iron salts which are leached out and carried to the roof, rib or roadway surfaces and dry out as an efflorescence of long silky white fibrous crystals.

In the oxidation process, a little free sulphuric acid is formed and this reacts with shaley or ankeritic material to form calcium, aluminium, magnesium and iron sulphates.

A recent analysis of selected white fibrous crystals showed:—

	Per Cent.
Ferrous Oxide (FeO)	13·3
Aluminium Oxide (Al_2O_3)	10·8
Sulphur Trioxide (SO_3)	36·0
Water (H_2O)	41·2
	101·3

Mixtures of iron, aluminium, and magnesium sulphates are of general occurrence in coal mines, but occasionally the individual salts of these metals are found.

However, in the above case, the composition suggests a mineral similar to Halotrichite.

Accommodation

This is a pressing problem and the lack of space and equipment is felt by all in the section.

The handling of zinc chloride solutions during the washability tests requires the use of protective clothing and visor, and work therefore could be rendered more acceptable by provision of better working conditions.

Coal and coal investigation will be with us for a long time and they are of utmost importance to the present and future economy of this State, and a set-up appropriate to such is urgently needed to facilitate the work.

Aggregate

A number of samples were submitted for reactivity test (Standard Method).

Although the reaction of aggregates with the alkali in cement has been well recognised in U.S.A. for many years, it was always stated that Canada was fortunate in being free of this source of trouble in concrete weir or dam construction. However, recently dolomite limestone aggregate used in the Kingston area of Ontario has been found to react with high alkali cement normally used in this district with serious results. The fact that Standard Test methods were useless in detecting the deleterious character of the Kingston limestone aggregate, suggests undue reliance might be placed on the Standard Methods.

Asbestos Cement

The following analyses showed the leaching effect of water on an asbestos cement underdrain system of a rapid gravity filter plant after 20 years:—

—	(1) Sound Edges	(2) Leached Section
	Per Cent.	Per Cent.
Loss on ignition	28·9	27·5
Acid insolubles (asbestos)	6·4	13·0
Soluble silica	14·5	28·4
Soluble iron oxide	5·3	2·8
Soluble alumina	(combined)	7·7
Soluble lime	41·3	7·0
Soluble magnesia	1·2	13·8
Soluble sulphur trioxide	1·8	0·3

In No. (2), the sample was taken across the whole of the face and this includes a small core. The outer portion was soft and laminated, but serviceable, and contained practically no cement bind. The laminations correspond to the building up of the cement asbestos layers to form the drain.

The presence of the soluble magnesia and the soluble silica in No. (2) indicates partial weathering of the asbestos, thus rendering it subject to attack by the acid used for the analyses.

Fumigation of Houses with Methyl Bromide

In January, 1958, the fumigation of 2,343 Housing Commission Homes was commenced by the fumigation contractors, and finished early in June, 1959.

OTHER DEPARTMENTS

The consultative and analytical services by this section have been well utilised.

Cement and concrete products, galvanised iron, crockery, metals and alloys, aviation oxygen, enamel ware, producer gas, corrosion products, filter sand, waters, earthern-ware pipes, electroplating, rubber, golden casket discs, jewellery and pozzolans indicate the diversity of samples handled.

Aviation Oxygen

Oxygen supplied to the R.A.A.F. is regularly sampled and sent by the A.I.D. to the department for test. The specification calls for a product containing—

Not less than 99·0 per cent. Oxygen.
Not greater than 0·002 per cent. CO.
Not greater than 0·020 gram moisture per cubic metre.

The supply of oxygen to this quality ensures the absence of iced up feed tubes to pilots and navigators flying at altitudes where temperatures average minus 60 deg. F.

Galvanised Iron

In respect of sheets of galvanised iron and ridge capping, some samples taken from roofing three or four weeks after placement were found to be suffering from the effects of "sweating" incurred during transport and poor storage prior to use.

The corroded areas showed patches of the white corrosion product (basic zinc carbonate) with dark-coloured areas which showed a bronzy effect in the sun. The dark colour is apparently due to areas of iron rich zinc alloy or an intermediate oxide stage prior to formation of the familiar white carbonate.

Fork Lifts in Holds of Ships

Investigations were made concerning the quality of air obtaining during the use of petrol fuelled fork lifts and end loaders in ships holds. The provision of adequate ventilation was found to reduce any carbon monoxide content in the air below the permissible limit of 0·01 per cent.

Pozzolans

A number of samples, chiefly sands, dolerite, weathered rock, gravel, obsidian, volcanic ash, clay, decomposed basalt, weathered shale, weathered tuff, were received from the Irrigation Commission to determine suitability for use as pozzolanic material.

A pozzolan is a material which will combine chemically with cement or free lime and among the advantages which may result from its use in a mix are:—

(1) Workability and quality of concrete are improved;
(2) Segregation is reduced;
(3) The concrete is less permeable;
(4) Because the rate and total heat generated during the setting of the cement are reduced, there is less shrinkage and less shrinkage cracking.
(5) Less water is required.
(6) Greater strength is obtained with decreased cement requirement.

A number of other naturally occurring materials such as pumice, and diatomaceous earth can be used, but usually some treatment such as drying at 100 deg. C. and crushing to a fine powder, are required. The use of a low alkali cement is essential.

SECTION 4

FEDERAL DEPARTMENTS, STATE STORES, PUBLIC WORKS, MAIN ROADS, &c.

J. ADAMSON, A.R.A.C.I., Chief Chemist, Officer-in-Charge

There was a marked increase in the number of samples examined by this section, when compared with the previous year.

The following table is a detailed list of the samples examined by this section:—

TABLE CXXIV

Customs and Excise	1,932
Primary Industry	1,214
Public Works Department	1,157
State Stores Board	700
Housing Commission	549
Main Roads Department	152
Explosives (Fireworks)	357
Other Government Departments	155
Public	30
Total	6,246

Commonwealth Departments once again provided the greater part of the work carried out by this section, although work done for State Departments showed a marked increase over previous years.

The samples submitted by the Federal Departments were as usual of a very diverse nature, those from the Customs and Excise Department being chiefly for classification for duty purposes, while those from the Primary Industries Department were concerned with the maintenance of export standards. It is of great importance that these standards should be maintained and especially during this period of difficulty in disposing of our primary products overseas.

The Public Works Department and the Housing Commission made increased demands on this section, and the bulk of the paints submitted were of a satisfactory quality. The continued checking of these paints has almost completely eliminated the inferior paints which were once offered to these Departments.

The State Stores Board also submitted a greater number of samples than in the previous year. The samples submitted by the Board included textiles, inks, detergents, insecticides, cordials, disinfectants, metal polishes, &c. Bitumen, tars and other road making materials were examined for the Main Roads Department.

Fireworks imported into the State were again examined by this section, and none of the imports contravened the Regulations of the Explosives Act.

The removal of the Water Section to South Brisbane will afford a considerable amount of relief to the paint section. The work of the paint analyst has been carried on under very cramped and unhygienic conditions for many years.

A new motor driven tensile strength machine is in process of being installed in an air-conditioned room. This machine will replace a hand operated machine that has given many years of service.

DIVISION OF NURSING

Adviser in Nursing: D. Bardsley, F.C.N.A., R.A.N.F.

Introduction

Visits to hospitals and various establishments concerned with nurse education undertaken by the Adviser in Nursing during a short study tour overseas served to emphasise the fact that all over the world at the present time nursing is in a state of flux.

This can well be understood when it is realised how vast have been the social as well as medical changes in the last half century and how little the pattern of nursing training has altered during that period. While agreeing that change should not be regarded as an end in itself and therefore intrinsically good institutions of all kinds must have the flexibility to meet changes which have occurred outside their own volition but which nevertheless vitally affect them.

To consider the general hospital service itself, which up to the present day has been practically the sole training ground for nurses the change in organisation in the last twenty or thirty years can only be described as staggering. From the comparatively simple pattern of medical and nursing responsibilities on one side and management and financial administration on the other we now have the complex organisation of many Departments, the head of each being a specialist in his or her own right. The Matron, for instance, once had direct control, not only of nursing but of domestic staff, catering, linen supplies, and laundry arrangements, and staff residences. In the large hospitals at least most of these are now run as separate departments. With the increased nursing staffs due to the shorter working week and the greater complexity of technical nursing and other factors, it has been considered both necessary and desirable to relieve the matron of the more detailed aspects of domestic management and the material welfare of the staff.

The simple medical team of doctor and nurse has been enlarged considerably, and these must now work with physical and occupational therapists, with radiographers and pharmacists with research and social workers and voluntary helpers from organisations such as the Red Cross. For this reason hospital matrons and managements find themselves facing a totally different situation from that of even ten years ago. In many cases it has not been easy for a matron to relinquish control of the many services which, in her view, are so tied up with the welfare and comfort of her patients and staff and to try to work smoothly with experts in an increasing number of departments. Like all senior administrators she has to learn to understand and reconcile the different points of view of all those who work alongside her in the organisation of the hospital and who should be expected to consult with the matron if their activities directly involve either patients or nursing staff. To deal with this changed and still changing structure matrons need special qualifications in addition to those which they possess as senior nurses in their particular field.

With regard to nursing work itself its volume and its technical nature have changed greatly in the last two decades. The number of patients using the hospital services has greatly increased, accelerated by new diagnostic techniques and curative treatments as well as by changing social conditions. The turnover of patients in the wards due to altered methods particularly in surgical treatments has been accelerated to a degree that the nurses of the past would have thought impossible.

It is sometimes difficult to realise that only a few years ago patients were assisted out of bed with care and ceremony on the tenth day after operation. Statistics from surgical wards now give such figures as a new patient for every bed in the ward in less than a week, and the situation cannot be judged in terms of statistics only. From the angle of the people involved this means new patients for the nurses to get to know, new treatments and constant mental adjustments for nurses and patients alike. For the ward sister this rapid turnover demands concert pitch throughout the week, new diagnoses, constantly changing instructions and unremitting supervision of nursing staff.

In the nursing of children so many of the former illnesses of childhood have been virtually eliminated but the rate of accident especially in the home shows a marked increase. At the same time psychiatrists are drawing attention to the detrimental effect of hospitalisation on young children and in some places schemes of home care are being developed to combat this.

Preventive programmes in many countries are bringing to the fore the importance of the work of the public health nurse in both the physical and mental health field. The increasing cost of hospitalisation as well as other factors is resulting in the enlargement of district nursing services in a number of countries.

As the complexity of the modern hospital increases it might understandably be asked who should do what? Where does the work of the nurse end and that of the technician, the auxiliary, the clerk, or the orderly begin. At this point the question must arise—what are the functions of the nurse in the modern health organisation and how should we train her to fulfil those functions.

In an endeavour to find the answer to this question considerable research is going on in a number of countries with highly developed health services. The General Nursing Council for England and Wales is encouraging hospitals to develop experimental schemes of nurse training. As a result of this policy integrated schemes of general and mental nursing; general, midwifery, public health and district nursing, and combined general nursing and social work are in progress and many are stated to have passed the experimental stage and are becoming part of the nursing pattern. Secondment schemes involving a period in mental or tuberculosis hospitals during general training and group schemes to repair deficiencies in experience at individual hospitals are flourishing all over the country. Scotland is trying a shortened (2-year) general nursing course and admitting nurses as undergraduates to a university for a tutor sister course with a diploma of nursing course in prospect. New Zealand has established a new curriculum this year by which a nurse may qualify in general nursing and Part I midwifery in a 3-year course.

A book published in the United States as the result of an extensive survey and entitled "Twenty Thousand Nurses Tell Their Story," has caused American nursing organisations to express dismay at the very small amount of time reported to be spent with the patient by the graduate nurse in comparison with the time the practical (assistant) nurse is at the patient's beside. This is illuminating in view of the increasing tendency to train and enrol a subsidiary grade of nurse.

Realising the necessity to use to the best advantage the available man and woman power, hospital management committees in Great Britain are making use of the time and motion study and job analysis previously developed in industry. A committee concerned with organisation and method is maintained at the Ministry of Health, London, and is being increasingly called upon to assist hospital managements with their problems in this respect.

There is no doubt that the rather fluid state of nursing at the present time should make it easier for authorities in Australia to plan for their own needs constructively and well provided the subject is given sufficient attention. As far as Queensland is concerned the Special Committee appointed by the Minister early in 1959 should have an important role to play in this regard.

The survey on the causes of wastage among student nurses in Queensland hospitals has continued throughout the year and the second table of figures published in the survey is attached to this report (Table CXXV). Other activities of the Division of Nursing are outlined in succeeding paragraphs.

SURVEY ON WASTAGE OF STUDENT NURSES

In this connection it is interesting to note that at the Conference of Departmental Officers of the Australian States held in Melbourne in April, 1959, to consider nursing training and education all States expressed concern at the rate of wastage of student nurses which was stated to be at times, alarming. It was recommended that a record be kept of every nurse who discontinues training and the reason therefor in order that the problem may be watched. It would appear that Victoria is the only State other than Queensland which has commenced the collection of wastage statistics and in view of the above recommendation it is encouraging to know that the Division of Nursing in this State has a well established system of records already in operation and has obtained the co-operation of matrons of hospitals in maintaining these. This is the second year in which it has been possible to publish complete figures from practically every training school in the State. In the one exception the newly appointed matron advised that the records previously kept are not satisfactory and she could not vouch for their accuracy.

The total wastage figures are slightly higher than those of last year and the percentage of the total students leaving hospital is also higher. Sixteen training hospitals had a wastage of over 50 per cent. and of these only five had a daily average of under 20 occupied beds; 6 were between 20 and 30 daily average and 5 between 30 and 50 daily average. They are in different areas of the State, a number coastal, others inland, and not all are in the hotter areas. It would seem that a common denominator cause of wastage in these hospitals must be present if it could be pinpointed. Seven hospitals, also of varying sizes and conditions, had a wastage of less than 10 per cent. There is no doubt that selection of students plays an important part in the prevention of wastage and it is interesting to note that a number of interviews with the Adviser by girls who had discontinued training showed that several had been given only short personal interviews before admission to training and very little information about the whole field of nursing had been given to them.

In hospitals visited in England it was noteworthy that great stress was laid on the importance of the personal interview in selection. The matron of one hospital conducting a combined course with a university stated that she personally interviews and selects these special students as well as those for the routine general training as they will be graduated with the badge of her hospital.

It has been proved that if girls applying for nurse training are made to appreciate the fact that they must measure up to certain standards, personal as well as educational before acceptance, they will value the appointment to training much more than if admission appears easy.

The General Nursing Council for England and Wales is seriously concerned that in the years since 1939 many girls of low calibre were accepted for training and have been unable to make the grade and this has had a detrimental effect on the profession as a whole.

A change in technique used by this Division in approaching girls who have left hospital with a good record has resulted in a greater response and therefore increased opportunity to place the girls in another hospital to complete their training. The sending of a simple printed form which a girl will find it easy to complete with a short covering letter seems to meet the needs of girls who have not the facility to compose a letter themselves. Questions asked include whether the girl is interested in completing her training later at her own or another hospital and if so would she like help or advice. It is encouraging that the majority who respond give an affirmative answer to this question and a number are willing to attend for a personal talk over their problems. These interviews point to the fact that young nurses often take the precipitate action of resigning when they are overtired or their sensibilities are hurt and they later regret it. Very wise handling is necessary in such cases.

The statistics concerning the number of student nurses leaving training on the grounds of ill health continue to be unsatisfactory and a changed procedure seems urgent. Forty-five students are listed as leaving for health reasons but it would not appear that there is any adequate check on this. Considering that a full medical examination including X-ray and various tests is supposed to be given before a girl is admitted to training and supervision of her health maintained throughout the training period, the hospital should have its own check on a girl's statement that she is resigning for health reasons. In some cases such as persistent dermatitis the doctor attending will recommend another occupation and this is usually stated but in most cases it would appear that the statement re ill health is accepted without question. It is surely a reflection on nursing as a suitable occupation for young girls if too many cease training because their health, physical or mental, can not stand up to it. The statements should be refuted or the matter enquired into more fully than is the case at present.

Another point at issue is whether the possibility of allergy to antibiotics is given sufficient attention in the initial instruction of the student nurse. The loss of a career through dermatitis, for instance, can have a very distressing effect on a young person and such cases call on the Adviser for interview from time to time.

VISITS OF INSPECTION TO SCHOOL HEALTH AND MATERNAL AND CHILD WELFARE CENTRES

At the request of the Chief Medical Officer, School Health Services, the Adviser undertook a visit to all School Health Centres outside Brisbane in the period September to November, 1958. It was decided that Maternal and Child Welfare Centres and Homes in the towns concerned should be visited at the same time. The inspection of Centres was carried out with special reference to office accommodation and equipment; School accommodation; residential arrangements for staff; records; itineraries; public relations; health problems of children in different areas and ways in which headquarters officers could be of assistance to country staff. At the conclusion of the visits a detailed report was submitted including a number of recommendations.

In view of the appreciation with which the visit of the Adviser had been received these included a suggestion that regular visits by a senior officer should be paid to public health nursing centres in order to maintain at a high level the morale of sisters working in outside areas and to check faulty practises which must inevitably occur when officers are working alone with no-one to refer to except by correspondence. A further suggestion that periodical refresher courses should be given to country staff was made for the same reason.

In view of the close association with families developed by nurses in the two services concerned and the observations they are thus enabled to make it was suggested that members of these services be included in any research programme concerned with children.

PUBLIC HEALTH ORIENTATION COURSE—SCHOOL HEALTH SISTERS

The Adviser again participated in the planning of the public health orientation course for newly appointed School Health sisters and those admitted for refresher work. The course was altered and improved as a result of experience with the first course held in 1958 and the Adviser again took part in the teaching programme. In this connection research was done into the history and development of the various public health nursing services and a series of notes on the subject prepared which have been greatly appreciated by public health nurses.

SALK VACCINATION CAMPAIGN

The Adviser in Nursing continued her association with the administration of this campaign throughout the year.

CONFERENCE OF DEPARTMENTAL OFFICERS OF THE AUSTRALIAN STATES

The Adviser was nominated by the Minister as one of the three official delegates from Queensland to the Conference of Departmental Officers held at the Nurses Memorial Centre, St. Kilda Road, Melbourne, on the 2nd April, 1959, to consider Nursing Training and Education. A joint report was later submitted.

ANNUAL CONFERENCE OF THE MATRONS' ASSOCIATION

This Conference was held in Brisbane from 25th May to 29th May inclusive. Approximately 70 matrons were present from all parts of the State. The Conference was officially opened by the Minister for Health and Home Affairs the Hon. H. W. Noble. The matrons had chosen the subjects of Geriatrics and Paediatrics for their study days and the programme was arranged as usual by the Adviser who also attended all sessions.

The completed programme included a statistical presentation of "The Problem of Geriatrics" by the Deputy Director of Health and Medical Services, Dr. D. W. Johnson, followed by a lecture on "Geriatrics—its Problems and Some Ways of Dealing with Them" by Dr. A. Fryberg, Director-General of Health and Medical Services who appended a short talk on "Alcoholism". Dr. L. S. Davies lectured on "Present Day Treatment of Burns in Children" and "Present Day Treatment of Croup" was covered by Dr. D. C. Fison, Medical Superintendent of the Brisbane Children's Hospital, and "Accidental Poisoning in Children" by Dr. R. N. O'Reilly. Dr. P. A. Earnshaw spoke on the "Newer Drugs in Children's Diseases", Dr. Roger Bennett on "Anaesthetics for Children" and "The Uses of Physiotherapy and Occupational Therapy in the Treatment of Sick Children" were dealt with respectively by Miss A. I. Forster and Mrs. F. Philcox, lecturers in those subjects at Queensland University.

Two discussion groups received an excellent response from the matrons—these were "Planning a Children's Ward" in which Mr. David Phillips, Consulting Architect, Dr. David Jackson, and a sister from the Mater Children's Hospital took part and "The Effect of Hospitalization on Children" conducted by Miss D. Bardsley and Dr. David Jackson. Dr. M. H. Gabriel, State Health Department, gave his impressions in words and pictures of the Seventh International Congress of Leptology.

The matrons voted the programme one of the most interesting and stimulating they had attended and many expressions of appreciation were received.

Thanks are due to the Brisbane General and Children's Hospitals and the Mater Hospitals for providing accommodation and arranging visits as well as morning and afternoon teas and to the Centaur Memorial Fund Committee, who provided accommodation for meetings and lectures as well as for the Official Opening.

Matrons were entertained to afternoon tea on the terrace of Parliament House by the Minister for Health and Home Affairs, the Hon. H. W. Noble, at the close of the Conference.

SPECIAL DEPARTMENTAL COMMITTEE

In January, 1959, the Adviser was appointed to a special committee set up by the Minister to study schedules of training and study and associated problems.

This Committee with the Deputy Director of Health and Medical Services as Chairman and Adviser as Convenor has had regular meetings since the early part of the year. Activities in connection with this Committee have added a good deal to the work of the Division.

STUDY PERIOD OVERSEAS FOR THE ADVISER

On 25th June, 1959, the Adviser left for England on special leave to attend a meeting of the Nursing Service Division of the International Council of Nurses and also to join Dr. B. F. R. Stafford, Director of Mental Hygiene in an enquiry into various aspects of nursing training and education and related matters. The programme for this study was arranged by one of the Deputy Chief Nursing Officers of the Division of Nursing, Ministry of Health, England, and covered most of the month of July, 1959. It involved visits to the Division of Nursing to discuss with the Chief Nursing Officer and her deputies, including Mental Nursing Officers attached to the Division, the work covered by the Division; to the General Nursing Council for England and Wales for discussions with the Registrar and the Education Officer; to three Colleges of Nursing conducting refresher courses as well as full post-graduate courses—the Royal College of Nursing; King Edward's Hospital Fund Staff Colleges for Matrons and Ward Sisters, respectively; Regional Nursing Officers of the Division of Nursing, Ministry of Health and a Committee concerned with Organisation and Method also attached to that Ministry.

Visits were also made to a number of hospitals, both general and mental, conducting integrated or secondment schemes of general and mental training or general, maternity, public health and district nursing; a visit was also paid to the Central Council for Health Education in connection with teaching material for departmental officers, who are required to take part in educational programmes. Valuable information was collected during these visits, which should prove very useful as a background for future planning.

Thanks are due to the officers of the Division of Nursing, Ministry of Health, England, for their valuable assistance in making arrangements for the programme, and to everyone concerned for their willing help, co-operation and hospitality.

INTERVIEWS

These are increasing in number and variety as more people are referred to the Division for help or information from various sources. There is no doubt that such interviews should be encouraged, as it can safely be said that in several cases they have been effective in preventing difficult situations in hospitals, where senior staff are involved and in minimising wastage of student nurses, where girls come for advice before handing in their resignations and can be persuaded to continue.

The scope for counselling is limitless both for graduate and student staff and in both hospitals and public health services, but it would be impossible for the Division of Nursing as at present constituted to cope with all that needs to be done in this connection.

Counselling interviews are very time consuming in order to bring to light reasons for worries or discontentment, before attempting to help towards a solution. Interviews with Regional Nursing Officers attached to the Division of Nursing, Ministry of Health, England, emphasise the value to hospital and public health authorities of the closer contact afforded by such appointments in connection with a Division of Nursing.

SPECIAL INTERVIEWS

These are also becoming more numerous. In addition to those concerned with the appointment of nurses to Government Departments, several interviews were conducted for the Nurses and Masseurs' Registration Board and also in connection with the appointment of a matron for a large hospital outside the metropolitan area. Another hospital requested that an applicant for the post of Sister-housekeeper be interviewed. Letters of appreciation were received from the hospitals boards concerned for the help thus afforded.

OTHER ACTIVITIES

In August, 1958, the Adviser was asked by the Matrons' Association of Northern New South Wales and the Australian Capital Territory to address their Regional Meeting at Casino Hospital on a subject which she considered would be of value to the matrons of country hospitals. Leave was approved for this purpose and the subject chosen was "Sterilization Procedures".

In response to a request from the Officers of St. John Ambulance Brigade the Adviser acted as adjudicator at their Home Nursing Competition on Saturday, 13th September, 1958.

The Adviser was asked to interview representative pupils of a special Senior form at Somerville House High School for Girls in connection with a Centenary Year project they had undertaken entitled "A History of Nursing as a Profession for Women in Queensland". Reference material was loaned and other information supplied. It was stated that many girls in the Form are interested in nursing as a career.

In May, 1959, on request from the Committee of the Creche and Kindergarten Association the Adviser gave assistance in connection with the establishment of standards for the management of Child Care Centres.

The Adviser continued as Examiner in Child Welfare for the Nurses' and Masseurs' Registration Board and as Queensland Representative of the Overseas Nursing Association in connection with interviews for applicants for the Colonial Nursing Services. Also on the Committees of the College of Nursing, Australia, and the Queensland Society of Health.

Papers on Acceptable Standards of various types of Nursing Service were reviewed for the International Council of Nurses.

The Adviser attended a Meeting of the Committee on Nursing, National Health and Medical Research Council in Melbourne on the 2nd and 3rd November, 1958.

Many invitations to annual meetings, graduations, conferences, &c., were received from organisations concerned with various aspects of nursing, public health and child welfare, and these were attended when possible.

TABLE CXXV—WASTAGE OF STUDENT NURSES—QUEENSLAND HOSPITALS FOR THE YEAR 1958

Hospital	Student Enrolment.					Total Year, 1958	Wastage of Students						Percentage of Total	Age Groups						Educational Standard					Reason given for Leaving						
	1st	2nd	3rd	4th	5th		1st	2nd	3rd	4th	5th	Total		17	18	19	20	21 +	Not known	8th and Under	Sub-Jnr.	Jnr.	Over	Not known	Not suited	Fail in Exams	Marriage	Personal	Health	Domestic	Others **
Atherton	11	11	7	6	..	35	1	..	1	..	..	2	5·7	..	..	1	..	1	..	..	..	2	..	..	..	..	..	..	1	..	1
Ayr	10	3	3	5	..	21	6	2	1	1	..	10	47·6	3	1	3	..	1	2	3	2	4	..	1	..	..	2	..	..	..	8
Barcaldine ..	2	1	..	1	..	4	1	1	1	..	..	3	75·0	1	..	..	..	1	1	3	..	..	..	..	..	..	3	..	..	..	..
Beaudesert ..	13	2	2	1	..	18	2	..	..	..	..	2	11·1	..	1	1	..	..	..	2	..	..	..	..	..	..	1	..	..	1	..
Biloela ..	4	1	2	3	..	10	3	1	1	..	..	5	50·0	2	2	..	..	1	..	5	..	..	..	..	3	..	1	..	..	1	..
Blackall ..	4	1	1	2	..	8	..	2	..	..	..	2	25·0	..	..	..	1	..	1	1	..	..	..	1	..	1	..	..	..	..	1
Boonah ..	2	..	..	..	..	2	..	2	..	..	..	2	100·0	..	1	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	2
Bowen	5	..	..	..	..	5	..	..	1	1	..	2	40·0	..	1	..	1	..	..	..	1	1	..	..	..	..	1	..	..	..	1
Brisbane General Hospital ..	358	278	160	152	..	948	138	80	39	10	..	267	22·5	48	83	65	38	33	..	129	42	85	11	..	32	13	35	5	28	21	133
Brisbane Women's Hospital ..	249	..	..	..	..	249	27	1	..	..	..	28	11·3	..	..	1	..	27	..	7	2	13	5	1	2	..	10	..	1	4	11
Bundaberg ..	26	16	15	10	..	67	13	6	5	..	..	24	35·8	1	9	6	..	8	..	12	1	10	..	1	2	2	6	1	2	2	9
Cairns	31	14	13	10	..	68	18	11	2	2	..	33	48·5	7	12	7	3	4	..	20	6	7	..	..	3	1	4	9	1	2	13
Charleville ..	8	1	1	..	..	10	2	2	1	..	..	5	50·0	..	1	..	1	3	..	2	1	1	..	1	..	1	3	..	..	..	1
Charters Towers	7	..	..	..	..	7	..	1	1	1	..	3	42·8	..	..	2	..	1	..	1	..	1	1	..	1	..	2	..	..	..	..
Chinchilla ..	5	..	..	..	..	5	1	..	..	..	..	1	20·0	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Clermont ..	4	1	2	3	..	10	..	1	1	..	..	2	20·0	..	1	..	1	..	..	2	..	..	..	..	..	..	..	1	..	..	1
Cloncurry ..	3	..	..	..	..	3	3	..	..	..	..	3	100·0	..	..	..	..	..	3	2	..	1	..	..	..	..	..	1	..	..	2
Collinsville ..	5	3	3	3	..	14	1	3	..	..	..	4	28·6	1	1	1	1	..	..	3	1	..	..	..	..	..	1	..	..	..	3
Dalby	No Sta	tistics	Availa	ble			5	1	..	..	..	6	..	2	2	1	..	1	..	5	..	1	..	..	2	..	..	3	..	1	..
Emerald ..	2	1	..	..	..	3	2	..	1	..	..	3	100·0	..	..	..	1	2	..	3	..	..	..	..	..	..	..	..	..	..	3
Gayndah ..	6	4	1	..	..	11	..	..	2	..	..	2	18·2	..	..	2	..	..	..	..	..	2	..	..	..	..	2	..	..	..	..
Gin Gin ..	1	2	..	..	..	3			Nil							Nil						Nil						Nil			
Gladstone ..	7	..	..	..	..	7	..	..	3	1	..	4	57·1	..	..	2	1	1	..	4	..	..	..	..	..	..	2	..	..	..	2
Goondiwindi ..	7	3	2	4	..	16	2	1	1	..	..	4	25·0	..	1	1	..	..	2	4	..	..	..	..	2	..	2	..	..	..	..
Greenslopes ..	2	11	10	6	..	29	..	1	..	..	..	1	3·4	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
Gympie ..	25	10	13	7	..	55	9	1	2	..	..	12	21·8	1	3	4	..	2	2	8	1	1	..	2	..	1	2	4	..	1	4
Herberton ..	8	1	2	..	..	11	6	2	..	..	..	8	72·7	7	..	..	..	1	..	4	3	1	..	..	3	..	..	..	..	..	5
Home Hill ..			Nil						Nil							Nil						Nil						Nil			
Ingham ..	8	3	2	..	..	13	7	..	..	..	..	7	53·8	4	..	..	..	3	..	7	..	..	..	..	..	..	2	4	..	..	1
Innisfail ..	6	12	3	1	..	22	5	4	1	1	..	11	50·0	2	3	4	..	2	..	6	2	3	..	..	2	2	3	..	..	1	3
Ipswich ..	53	2	..	..	..	55	5	5	3	..	..	13	23·6	1	3	5	..	4	..	6	..	7	..	..	..	1	..	2	1	2	7
Isis-Childers ..	1	..	1	1	..	3	..	..	1	..	..	1	33·3	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..
Kilcoy	..	5	..	..	..	5			Nil							Nil						Nil						Nil			
Kingaroy ..	8	9	8	5	..	30	..	..	..	1	..	1	3·3	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..
Longreach ..	3	1	2	1	..	7	4	1	..	..	..	5	71·4	3	1	1	..	..	..	1	2	..	2	..	..	..	1	..	..	1	3
Mackay ..	20	10	3	6	..	39	7	3	1	2	..	13	33·3	2	2	1	4	4	..	5	3	5	..	..	3	1	3	2	1	3	..
Mareeba ..	10	3	6	5	..	24	3	..	1	2	..	6	25·0	1	1	..	2	2	..	5	..	1	..	..	2	..	2	..	1	1	..
Maryborough ..	24	21	15	10	..	70	3	7	7	1	..	18	25·7	3	6	5	2	2	..	10	3	5	..	..	4	3	3	1	1	1	5
Miles	2	3	..	1	..	6	..	1	..	1	..	2	33·3	..	..	2	..	..	..	1	..	1	..	..	..	..	1	..	..	..	1
Mitchell ..	3	..	..	..	..	3	..	..	1	1	..	2	66·6	..	1	..	..	1	..	1	..	1	..	..	..	..	1	..	..	..	1
Monto	3	2	5	4	..	14	..	1	..	..	..	1	7·1	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
Mossman ..	3	..	..	..	..	3	2	1	..	..	..	3	100·0	1	..	1	..	1	..	2	..	..	..	1	1	..	1	..	1	..	..
Mount Isa ..	7	4	1	2	..	14	6	2	..	1	..	9	64·3	2	3	..	1	3	..	4	2	2	..	1	3	..	..	2	1	..	3
Mount Morgan	13	2	4	1	..	20	4	2	4	2	..	12	60·0	2	2	2	3	3	..	7	2	2	..	1	1	..	7	1	..	1	2
Nambour ..	7	11	7	7	..	32	..	2	..	..	..	2	6·2	..	..	2	..	..	..	2	..	..	..	..	..	..	2	..	..	..	..
Proserpine ..	4	3	2	3	..	12	..	..	1	1	..	2	16·6	..	..	..	1	1	..	2	..	..	..	..	..	..	1	..	..	..	1
Rockhampton	25	24	16	9	..	74	5	2	7	1	..	15	20·3	1	2	3	3	6	..	11	..	3	..	1	3	..	3	4	..	..	5
Roma	7	10	5	2	..	24	4	3	..	..	..	7	29·2	2	2	1	..	2	..	5	1	1	..	..	..	..	1	2	..	..	4
Southport ..	10	1	..	..	..	11	2	..	..	..	..	2	18·2	..	..	..	..	2	..	..	..	2	..	..	..	..	..	1	1	..	..
Stanthorpe ..	7	4	3	7	..	21	..	1	..	..	..	1	4·7	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Toowoomba ..	31	31	29	19	..	110	16	3	3	1	..	23	20·9	3	4	7	1	8	..	2	3	17	1	..	2	..	5	..	1	..	15
Townsville ..	39	35	34	19	..	127	19	3	6	4	..	32	25·2	4	6	6	5	10	1	26	1	4	..	1	2	2	7	2	2	1	16
Tully	4	2	1	2	..	9	4	..	1	..	..	5	55·5	2	1	2	..	..	..	3	1	1	..	..	1	..	2	..	..	..	2
Warwick ..	11	9	13	6	..	39	2	..	..	1	..	3	7·7	1	1	..	1	..	..	1	2	..	..	..	..	..	2	1	..	..	..
Winton ..			Nil						Nil							Nil						Nil						Nil			
Wondal ..	7	2	4	3	..	16	..	2	1	1	..	4	25·0	1	..	..	1	2	..	2	..	..	..	2	..	..	2	..	2	..	..
Totals ..	1,121	573	401	327	..	2,422	337	162	101	37	..	638	26·3	110	159	140	73	144	12	335	82	187	20	14	74	28	129	47	45	44	271

** Dissected as follows—

Transfer to another hospital	41
Left without notice	38
No reason	37
Another position	30
Leaving the district	24
Family illness	21
Homesick	15
Doesn't like nursing	11
Dismissed	10
Asked to resign	9
Retired for misdemeanour	9
Unsatisfactory conduct	2
Unhappy	2
Family wanted her to leave	2
Finds work too heavy	3
Study too difficult	2
Miscellaneous	15
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DIVISION OF WELFARE

At this early stage it is useful to review the welfare activities of the Department of Health and Home Affairs. Institutions such as the Institution for the Blind and the various Eventide Homes for the aged are maintained by this Department. In addition, grants or subsidies are made to a large number of homes and shelters, as well as to the Marriage Guidance Bureau, the Creche and Kindergarten Association and the Mothercraft Association. By running free public hospitals and by caring for State children as well it might be thought that sufficient effort was being made in the field of human welfare.

One prominent need, however, was met inadequately. This was the child with an emotional or behaviour disorder which was sufficient to cause social, physical, or mental disability. A child, if of school age, could be referred to the Research and Guidance Clinics established about ten years ago by the Department of Education. Older children could go to a psychiatrist or to the Psychiatry Clinic. The parents of the pre-school child had no service of referral. If treated at all, the child was taken to the family doctor or the Kindergarten teacher might give advice.

Although the Psychiatry Clinic accepted and treated some children it had inadequate staff and there were in Queensland no child guidance centres approximating those already established in most other Australian States.

This defect is well on the way to being surmounted. Welfare and Guidance Clinics for children and their parents are now being established here. One of the initial difficulties was a building, centrally placed, which would be big enough for the work the clinics would attract. After considerable difficulty, a building at 30 Mary Street, occupied by various State Boards, was secured for the joint occupancy of the Mental Hygiene Administration and of a central Welfare and Guidance Clinic. These will have separate entrances and there will be little likelihood of parents or children wandering into the Mental Hygiene offices in error.

The Central Clinic will have two teams each comprising a medical director (who is a qualified psychiatrist), a psychologist, and one or two social workers, together with the necessary nursing and clerical staffs. One of the medical directors will be senior and will be responsible for the administration of the unit. Dr. B. J. Phillips, the Senior Medical Director, will take up duty on 3rd August. Two psychologists have been appointed and applications for other positions are now being called.

The field of guidance in childhood is immense and none can deny its great potential importance. Adverse experiences and failures to adapt to the world in early life place their stamp on the personality of the child, determine the type of adult he will become, and can affect profoundly the future generation. As the mists about the causes of mental illness are dispelled by knowledge, those who can see realise more and more the importance of the first ten years of life. Failure to adapt, perpetuation of emotional and behaviour disorders, and an unsympathetic or hostile home climate constitute factors in mental sickness that are too important to ignore. If ever we are to prevent mental illness or to make an effective attack on it, we must look after our children. There must be gradual but progressive development as the demand increases, for there is no doubt that if child guidance clinics ever become as popular as the out-patient department of our hospitals, even projected facilities would be unable to cope with the demand.

The first Child Guidance Clinic was set up in America more than fifty years ago and the principle of guidance for some children has gained wide support all over the world. Of course, it is necessary to retain perspective and not to introduce new measures merely because some other state or country has adopted them. It is salutary also to stop and to think back over man's history. Since events were first recorded, men and women have entered into marriage, produced and reared children, and no doubt at some time all of them were given advice on how to bring them up properly. No doubt, also the advice was frequently shown later to be incorrect. Such a perspective makes us feel humble and rather doubtful whether we of this generation know any better than those who have gone before.

We can be reassured, however, on certain points. At no time in the past have we accumulated so much knowledge or made so many measurements of the development of human personality and of the behaviour of man in his varied social, racial, and cultural groupings.

The social sciences, such as sociology, anthropology, and psychology have made very significant contribution to the knowledge of human behaviour and this new knowledge needs to be applied to people as they grow and live. In other words, the prevention of mental and social ill health must be an essential activity for a progressive health department.

This is a proper function for a Health Department. Just a little over fifty years ago, Truby King and others showed that babies need not die in the first year of life provided milk was heat treated and good hygiene was exercised. These techniques applied by doctors and by baby clinics have revolutionised the physical well-being of babies. It is not at all unlikely that the next half century will show changes just as marked in the mental welfare of children. Already it is becoming common knowledge that a child needs a home with parents who can give him affection and security. If these are taken away the bottom drops out of his world and personality disorders follow as surely as night follows day. Likewise, children deprived emotionally develop complexes and behaviour disorders. These children, if detected and treated early, may grow up into more or less normal adults, but if untreated and undiagnosed, can develop anti-social behaviour, neurosis, and even certifiable mental sickness.

It is, therefore, logical to offer children and their parents a service which will help them overcome some behaviour disorder. Not only will they learn, but they will pass the correct procedure to others. Likewise, doctors, nurses, and university undergraduates will attend the clinics from time to time to learn new techniques which will help them to treat problem children.

The Welfare and Guidance Clinics will not treat every child with a disorder of behaviour. This would be far too many for the limited staff. An intelligent parent can do a great deal for a child if the mother gets advice from the family doctor, a baby clinic, or the psychological guidance service available at most State schools in recent years. They will take children up to 18 years of age from the following sources:—

(*a*) A doctor;

(*b*) Another Government Department (e.g., Education Department, Maternal and Child Welfare, State Children);

(*c*) A judge or magistrate (these children will be examined while on remand);

(*d*) Selected social service agencies (e.g., Creche and Kindergarten Associations).

As the central Clinic will be able to take only 400 to 500 new children each year it can be anticipated that there could be a waiting list before many months. If this is so, plans are in hand to open a satellite clinic in a suburb within the Greater Brisbane area. As the service expands it may be necessary to open clinics in other parts of Brisbane as well as in the major cities.

From this brief review it can be seen that at last a definite programme of development in child guidance activities has been laid down. It has been long overdue, but the rate of expansion will depend only partly on the way the service is used. A major difficulty will be in securing suitable premises and staff, particularly psychiatrists and social workers.

ALCOHOL CLINIC

Medical Officer: E. J. O'SULLIVAN, M.B., Ch.B.

This Clinic commenced operations on 30th July, 1958. Its necessity arose because of the increased importance which the problem of alcoholism has assumed in the community, resulting not from marked increased consumption but from an increased sense of social responsibility which demands some positive action to prevent it and to treat is as a medical disease.

The Clinic at the Brisbane Hospital consists of an Out-patient and an In-patient Department. Fifteen male patients are accommodated in three wards and six patients are accommodated in the female ward.

The Clinic works in association with Ward 16 and Lowson House.

FUNCTION

The Out-patient Department is for ambulatory patients—the majority of those treated—and for early cases, for follow-up cases, and for interested persons. Treatment at this level is desirable, because there is less change in environment, i.e., the home life and the family unit is preserved. The patient can remain employed in most cases with less financial upset. In addition, the transition period from hospital back to home, job, and previous routine is avoided.

The In-patient Section is for those too sick to have a reasonable chance of making the grade at the out-patient level. It is for active treatment and for rehabilitation.

The Medical Officer acts as a consultant for alcoholic patients in Ward 16 and it is here that the "drying-out" process of the patient takes place as no acutely intoxicated person is admitted to the Clinic.

Occupational therapy is available to patients in Lowson House.

Patients first attend the Clinic at the suggestion of relatives or friends or are referred by clergymen, Alcoholics Anonymous, Magistrates, and the Courts, or attend on their own initiative. Patients are also referred from the Casualty Department of the Brisbane Hospital. No patient is admitted unless he desires treatment.

THE ADVANTAGES OF HOSPITAL TREATMENT

In hospital there is a closer and more continuous association between patient and staff which is very important to the alcoholic. Laboratory facilities are available and emergency measures can be carried out. Where the family environment is bad and a factor in the case or where the relatives are unable to cope with the situation, not understanding it, hospital treatment helps very much.

A change in attitude towards the alcoholic by the public, both lay and medical, is long overdue. One frequently hears remarks to the effect that the patients do not look sick people yet they are occupying hospital beds, and so forth. The effect on a patient overhearing such remarks may be very frustrating to his efforts to fight down screaming nerves and tensions. Patients are trying to put the best possible face on life though not obviously sick in the way a patient would be when recovering from an acute abdominal operation or in the throes of an acute medical crisis.

Male cases needing long term treatment are accommodated at the Inebriates Home, Marburg. There is a record number of patients at present.

The stigma carried by alcoholism appears to be fading very slowly with increased public awareness of the nature of this affliction. The prejudice is, however, still very strong. Education of the public and the individual through the usual channels needs to be pushed and continued.

On each occasion when reference has been made in the press to the Alcohol Clinic there has been an influx of patients and new interest in the Clinic.

In America films on alcoholic problems followed by discussions have proved helpful in schools and other organisations.

Information through brochures, lectures, films, radio, newspapers, and propaganda would keep the community constantly aware of the alcoholic problem—its prevalence, its dangers, preventive measures, and treatment.

Health education is being carried out by the Queensland Health Education Council.